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THE IRON WARRIOR

THE NEWSPAPER OF THE UNIVERSITY OF WATERLOO ENGINEERING SOCIETY

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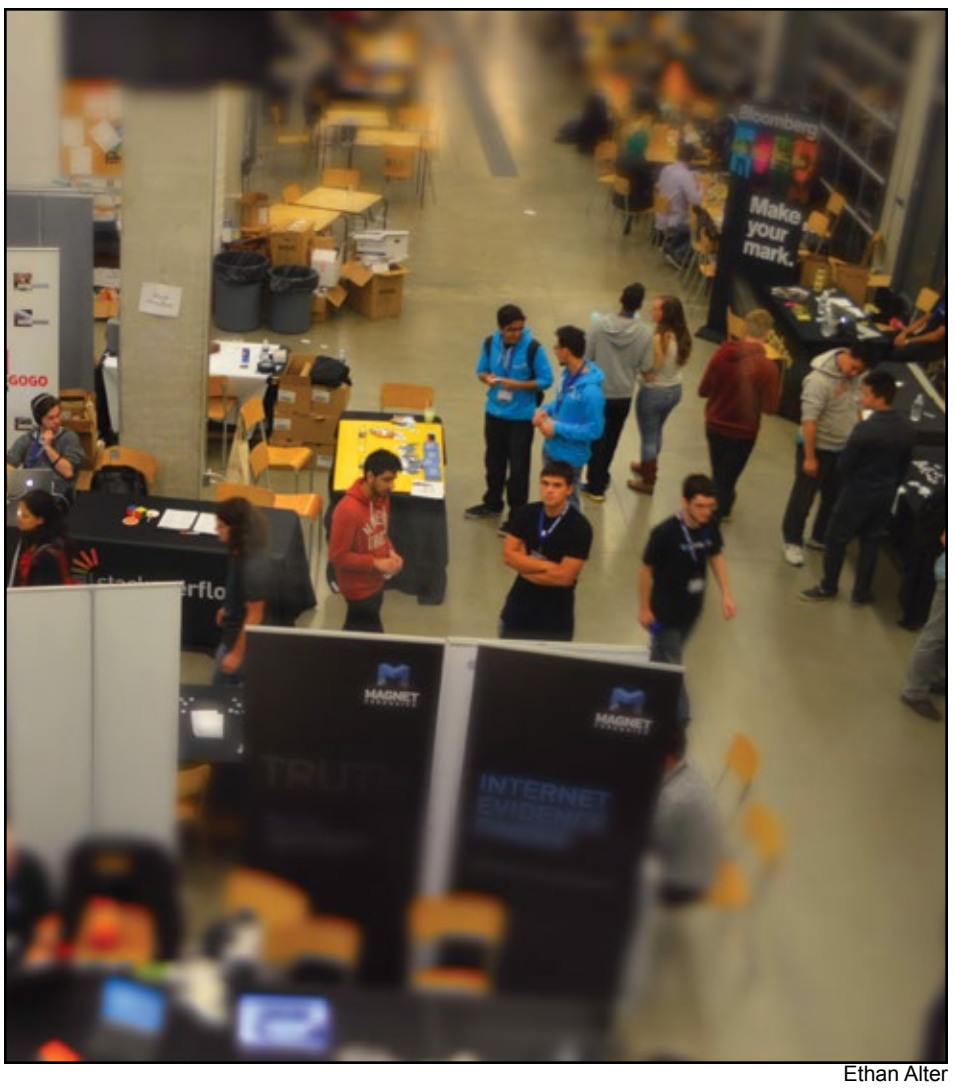
Hack the North Descends on Waterloo



Ethan Alter

Engineering 5 was busy at all hours last weekend as it played host to over 1000 Hack the North participants and volunteers

ETHAN ALTER, DEON HUA, KAIVALYA GANDHI
IW STAFF WRITERS

Jam-packed with students, industry leaders, and a whole lot of coffee, E5 was a hive of activity this past weekend. The event, Hack the North, was Canada's first, and largest international-scale hackathon, including hackers from as far away as Brazil, Korea, and China.

The University of Waterloo has often been called the MIT of the north. It is fitting then that students from MIT were among the 1,000 participants, which also included students from Harvard, Princeton, and Yale.

Hackathons are events where participants come together to learn, code, and compete to develop the best tech solution to real-world problems. The event pushed participants to their limits as they brainstormed and implemented their ideas, vying to be among the top competitors after the 36 hours were up.

A team from MIT created a project which they named Remembrall. Designed as an app for Google Glass, Remembrall lets users dig through the Glass's daily archive of audio and video to pick out vaguely remembered moments from the day. Don't get your hopes up, though. The app, much like the magical device of the same name used by Neville Longbottom in the Harry Potter series, probably won't make it into your hands in the near future.

A team of Waterloo engineers developed a smart garden designed to monitor the health of household plants. The automatic gardening system is able to dispense water throughout the day based on a plant's daily intake.

"Engineering is creative. Our students are solving all kind of problems and very often bouncing off ideas and inventing new solutions", said Pearl Sullivan, dean of engineering. "Our students regularly attend U.S. hackathons and often win top awards. The Hack the North event has created an opportunity for our students, and students from around the world, to form relationships and work together to solve problems using technology."

Industry leaders from tech giants Google, Microsoft, and IBM were on hand to provide mentorship and advice to the student teams. Pebble and Kik, two companies founded by Waterloo graduates, were also present.

Hack the North announced on their mobile app that the top ten teams at the end of the event were: Open Pokemon, Lend, Spacebowl, Botscape, Pinpoint, Guava, Rememberall, Signlang, Silicon Man, and Flock.

Among the top ten prizes were individual awards presented by sponsors, awarded to the best product fitting specified requirements.

Regardless of their standing, all teams should be proud of their accomplishments, given the rigorous work-ethic required to pump out a finished product within 36 hours. Many successful companies have been born out of the hackathon culture. Given the skills that these bright minds have exemplified, it wouldn't be surprising if a few companies were born out of this successful Canadian first.

Organizing a Hackathon

Creativity was in high demand even before the event began. Organizers, including many UW Engineering students, were faced with many challenges and unanswered questions. How would they provide secure internet to the 1,000 participants? How would they keep participants informed and in touch with each other? How were they going to get large volumes of information from would-be competitors without scaring them off? In the end, they solved these problems and more; successes they speak about as proudly as any hacker.

Of course, Hack the North would not be possible without the help of their many volunteers, who helped organizers facilitate the smooth operation of the event. Vic Vu, founder/organizer of Hack the North mentioned that "the engineering faculty has been a huge help; [Dean of Engineering] Pearl Sullivan has been a huge help from the start. She's the reason we got E5 [and Sam Altman, president of Y Combinator]."

Ensuring participants had uninterrupted, secure internet was a big priority. E5 was not designed with the high volume use internet in mind. Valentin Tsatskin, the User Experience expert and a 3rd year SYDE student, worked around-the-clock with the Information Systems and Technology (IST) department to expand the number of Wi-Fi access points in the building. They also placed switches in concentrated areas, which helped increase device capacity in E5 to 3,000+ devices.

Space for an event like this is limited. Early on, the 1,000 participant cap posed a large challenge for organizers. How were they supposed to screen applicants? To find the most motivated and innovative people, they screened for technical experience and creative drive. This called for the use of analytics and a change in the application user interface. Alongside these two implementations, the team also employed the usage of software suites including GitHub, Slack, Base, and Streak to develop and manage the underlying framework of the event.

When only a long form was used, the team noticed that people weren't making it to the end of sign up .

Tsatskin said, "We got tired of arguing for an hour, and I said 'let's just test it, there's no point in arguing." We pulled an all-nighter creating the horizontal sign up form you see today. We tested it for a week and found that even though we had the exact same questions, the horizontal form had double the conversion rate of the long entry form."

In the end, it was worth it, of the applicants accepted, 91.58% confirmed that they would be able to attend. Graduate students and roughly 50 high school students also contributed to the hacker population, bringing the total to about 1,000 hackers.

When it comes down to it, Hack the North was successful from all perspectives. The general sentiment among hackers, sponsors, and start-up incubators was overwhelmingly positive. UC Berkeley student Eva Zheng mentioned that "[Hack the North] has been by far one of the most impressive hackathons I've ever been to. Huge, huge props to you Waterloo." After the Hackathon, Altman tweeted that he thought "waterloo is the most impressive up-and-coming startup city i've been to."

It's clear that anyone involved in Hack the North, especially the team behind it, should be wildly impressed with the end-products – impressive hacks and a stellar event.

New Term, New Adventures

Welcome Back To Campus Everyone!

LEAH KRISTUFEK
EDITOR-IN-CHIEF

Hello friends,

Before I begin my editorial I'd like to address the tragedy that touched our engineering family in the short time since I last talked to you. To lose someone so early in their life, just when they were embarking on a great new adventure is never an easy thing. Whether you knew the student in person or simply have been touched by the improbability of it all, it has affected all of us. I would like to remind all of you of the support that can be found in the form of friends, classmates, and counselling services (see the contact information listed at the end of this Letter).

However, the support goes beyond grief counselling. We're all in this together. Engineering is a challenging program, unlike other programs you can't simply drop courses (except in specific cases) and you have to participate in co-op. Juggling labs, job applications, 5-6 classes, assignments and possibly extracurriculars are probably going to cause you to have some very stressful days or even weeks. Although it might seem like something you have to do alone, that is not the case. Studying with friends and asking each other questions can do a world of good. Interspersing studies with breaks can be even better. Of course it goes without saying that plagiarism is bad, so don't do it. No one wins from plagiarism.

It is easy to become overwhelmed by university life. There is a lot going on and not nearly enough time to do it all. You might tell yourself that you should be able to do something when you are plainly struggling, yet refuse to seek help out of pride. It is time to stamp that out. The longer you wait to get help the worse it will be to resolve. That goes for everything – from linear algebra (which let's be honest doesn't fully make sense until after the final exam) to just being sad. Look after yourself! Eat regularly and as healthily as possible. Sleep lots, exercise occasionally. These are the recipe for success. Keep at it and some day it will all be worth it. When that day comes, when you read an equation just as easily as these words you are reading now and apply it to some design or project of yours you will feel gratified. However, that is not today. In the short run sometimes you just need to take a break, recollect yourself, and start over. You won't always need to go out to that party or buy those tickets to be accepted. You will get there.

It is easy at school to lose focus on the reason you are here in the first place. Yes, in part it is to find rewarding employment afterwards. If that is your sole reason for coming here then I can't really fault you. Yet some part of me likes to remember how in older times an education was as much about culture as it was about mastering the art of mathematics or analyzing pressure build up in a system. Since television and smart phones, there may not be the same propensity towards lengthy debates but that doesn't mean we should all stop wondering about things. Certainly we shouldn't limit ourselves by the program we are studying. Expand past your classes and take the time to try bouldering in PAC, or fencing, or maybe a new language, or go to a different event.

There are more resources here at your finger tips than ever before, more people with similar interests and more opportunities. The university is always happy to tell potential students how if you have an interest there's a club for it. I think more than that, it's the things you didn't mean to do that can be the most valuable. These things include things a friend drags you to at the last minute or something you stumble upon by accident. It is an atmosphere of learning and chance discoveries.

even when just meandering about campus you can sometimes happen upon some very interesting things. When I was in first year I took lots of walks. In the winter it was rather chilly so I tended to wander around the buildings on campus. Over time I think I have found most of the connecting passages to keep myself from having to go outside. On my walks I checked out the taxidermy displays (well mostly skeletons) on the third floor of Bio 1, the dinosaur fossils and cool rocks in EIT, and got lost attempting to take the overhead walkway from E3 to E5. For most of my adventures I didn't have a phone- I didn't get one until reading week- so when I got turned around trying to find the math comfy lounge in MC, I had to wander around until I found somewhere I recognized then go from there. So through my being lost I got to discover little niches on campus I hadn't expected to find.

Now this is probably a good spot to bring up co-op. For engineering students co-op is an unavoidable fact of life. This past weekend, many of us sifted through the jobs on Jobmine and decided what types of adventures we were willing to sign up for. Which places we'd be willing to move to for four months, what jobs we'd be willing to do, where we'd draw the line employment wise. I wish I could give some sort of sage advice on co-op, but really it's up to each person to learn where they are willing to go. However, I can say that I hope to soon be seeing halls filled with spiffy people ready to charm potential employers. Get ready, because soon it will be time for everyone to re-evaluate just how it is that our greatest weakness can also be one of our strengths.

Co-op can be frustrating, especially because you have to take time out of your weekend to apply to jobs. Then, if that went well you might have to skip class or even midterms to attend interviews. Personally I haven't gotten too many interviews, but for the most part the interviews were for jobs I really wanted and they led to employment. I really lucked out on my first co-op, although initially I had all but given up on finding a job. I didn't even get any interviews until well into continuous round, by that point I had already resigned myself for a summer spent at home working at Tim Hortons. Instead I got a civil engineering job in Whitehorse, Yukon working on water treatment systems for First Nations communities.

Being up north was a really great experience, one that I would repeat in a heart beat, even if it was during the near 24 hour darkness of winter instead of the summer! Work trips involved six hour drives through wilderness barely touched by humans. In a six hour drive you might only encounter a town or two. In the Yukon a town means two things: Check your phone, there is a cell network again, and gas up because it will probably be your last chance for another three hours.

The Yukon was a really exciting place to live and work. If you ever mention it to someone who has been there for any period of time you will be regaled stories of their adventures. I mainly worked behind a computer in an office. However, since there was nearly 24 hour sunlight I would come home from work, eat, nap and then go out for late night bike rides or runs. One day as I was biking to work there was actually a horse just munching grass on the side of the main road (This was in Whitehorse, the capital of the territory.). I bought bear spray because the paths I biked on had frequent bear sightings despite being 'in town'.

I know going up north might not be everyone's cup of tea. Perhaps you want to live in the crazyness of a large metropolitan center or start work everyday at 10:30 am. Co-op, like your future job after graduation, is what you make it, so experiment a little bit, stay safe and hopefully you will enjoy the ride!

Support Services:

Engineering Counselling Office:
CPH 1320,
(519) 888-4761 ext 84761

UW Counselling services:
Needles Hall room 2080,
519-888-4567 x 32655

Good2talk :
1-866-925-5454 or 211

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UW Ranks 169th in World University Rankings

International Ranking Continues to Climb

ANDREW MCMAHON
4A ENVIRONMENTAL

The QS World University Rankings for 2014/2015 were released last Tuesday. The QS world university rankings are annual university rankings published by British Quacquarelli Symonds (QS). In this most recent release, the University of Waterloo (UW) placed 169th in overall score with the Massachusetts Institute of Technology (MIT) in the United States, and the University of Cambridge in the United Kingdom claiming the top two spots in that category. This was an improvement of 11 spots from the 2013/2014 rankings in which UW was ranked 180th internationally.

UW claimed 51st place in North America with MIT and Harvard in the United States claiming the top two spots, and seventh in Canada where U of T and McGill took the top two spots. The Canadian ranking is much lower than the most recent rankings posted by MacLean's University Guide which ranked Waterloo as second in the category of best overall university in Canada.

In order to come up with the QS World University Rankings, six indicators each of which is given a different percentage weighting, are combined to come up with the overall score. Four of these indicators are based on facts while the remaining two are based on surveys.

The two categories based on surveys are academic reputation and employer reputation with a percentage weighting of 40% and 10 % respectively. In the academic reputation survey academics are asked to identify the institutions where they believe the most work is currently taking place in their field of expertise; and in the employer reputation survey, employers are asked to identify the universities they perceive as producing the best graduates.

The four remaining categories based on factual data are Student-to-faculty ratio, citations per faculty, international faculty ratio, and international student ratio with percentage weightings of 20, 20, five and five percent respectively. Student-to-faculty ratio is a measure of the number of academic staff employed relative to the number of students enrolled. Citations per faculty are measured using Scopus, the world's largest database of research abstracts and citations. International faculty and international student ratio assess how successful a university has been at attracting students and faculty member from other nations and is based on the proportion of international students and faculty members to overall numbers.

UW ranked third in Canada in "Engineering and Technology" behind U of T and U.B.C., and second in "Computer Science and Information Technologies" in Canada behind U of T.

These rankings do matter. Despite how much their influence is downplayed, many students use rankings such as these and Maclean's university guide when choosing which university to attend for their post-secondary studies. Unfortunately the importance of how these rankings are derived is sometimes not considered and the ranks are simply taken at face value. The four categories based on factual data are largely out of the hands of the student body here at the University of Waterloo, but the two global survey categories are an area that each and every student has the opportunity to influence. Students who graduate and enter the workforce can have a positive impact on UW's employer reputation, while those continuing their education with graduate studies can have a positive impact on UW's academic reputation. UW's international reputation improves as our overall ranking continues to climb, and that looks good on everyone involved.

While we may not have cracked the top 10 universities in the world, we can all take comfort in the fact that these QS rankings rank 800 universities around the world, after assessing over 3 000.

The History of Ebola as a Biological Weapon

DEREK KAN
2A CIVIL

Ebola. These five letters have been painting a wall of fear across the world after the recent outbreak in Africa of the life threatening disease. With an average fatality rate of 52%, the Ebola virus starts with flu like symptoms and can progress to external and internal hemorrhaging and death. The virus is spread through contact with infected bodily fluids, making the potential for widespread infection to be low. However, it should never be taken lightly. In fact, Ebola has a history involving research for biological warfare. Although a Biological Weapons Convention took place in 1972, it is extremely difficult to track down efforts to create bioweapons. Unlike nuclear bombs which require a uranium mine, a nuclear power plant and so forth, biological weapons can be created in small, easy to conceal laboratories.

The concept of using Ebola as a weapon dates back to the 1970s with the Soviet Union's biological warfare agency Biopreparat. It was an immense network of secret laboratories focusing on different types of deadly biological agents for use in a major war. The research at Biopreparat blatantly violated the terms of the Biological Weapons Convention, which prohibited bioweapons. Soviet officials denied its existence for decades. Pathogens that were under development at the time included Ebola and a hybrid of Ebola and smallpox called Ebolapox. Ebolapox could produce a form of smallpox call blackpox or hemorrhagic smallpox. In such an infection blood vessels leak, resulting in severe internal bleeding. It would be fatal combination of the high mortality rate of the Ebola virus and the highly contagious nature of smallpox. In the early 1990s Ken Alibek, an integral member of Biopreparat, defected to the United States to alert Western Intelligence about the covert program. He confirmed that the program was actually ten times greater than the West originally suspected. Alibek also claimed that development of genetically engineering weapons was still continuing, and included the use of Ebola.

At around the same time in 1992, a Japanese terrorist organization, Aum Sinrikyo, also considered the use of Ebola as a terror weapon. A group of 40 members went to Zaire, now known as Congo, under the disguise of offering medical aid to Ebola victims in an unsuccessful attempt to acquire a sample of the virus. The incentive of using this virus as a weapon is its high mortality and the lack of a cure or vaccination. It has the potential to be weaponized, but could be difficult to prepare as a weapon of mass destruction because it quickly becomes ineffective in open air.

Various experts have pointed out that Ebola is not likely to be used for bioterrorism in the near future. In order to do so, a terrorist organization would need to obtain a live host infected with the virus and transport it to a Category four laboratory. Such laboratories are the only suitably equipped locations to extract the virus sample, only two dozen of which exist in the world. Without such labs, the handling of the virus would likely result in the death of the handler. Even then, the process to weaponize the virus is extremely complex, involving many further processes. Ebola is not well suited to any of those processes that ensure the survival of the virus after being fired or released from a source. Furthermore, Ebola is not a very robust disease; it is sensitive to climatic conditions, requiring a very specific environment to survive including high temperatures and humidity. Therefore if the virus was transported and delivered to a Western city the sub-optimal climate would kill it off relatively quickly.

Lastly, unlike other viruses and toxins used for bioweapons, Ebola has a relatively slow transmission rate because it is not airborne. Requiring contact with infected bodily fluids makes Ebola less contagious than viruses that are airborne and is therefore easier to contain. According to experts, when proper protocol is followed, Ebola is considerably less contagious than common viruses like measles or the flu.

A New Age of Space Exploration Begins

NASA Contracts out Space Travel

ALLEN CHEN
2A CIVIL

When the Space Shuttle Atlantis landed in Florida on July 21, 2011, almost 40 years of space shuttle missions operated by NASA officially ended. After over three years of hitching rides on Russian Soyuz spacecraft at a price of $70 million per seat, NASA awarded contracts to The Boeing Company (Boeing) and Space Exploration Technologies Corporation (SpaceX) to construct passenger spacecraft to carry astronauts through low earth orbit and to the International Space Station (ISS). These are officially named Commercial Crew Transportation Capability contracts, totalling up to a value of $6.8 billion. This partnership is important for the future of the American space program as NASA funding has stagnated at around less than half of a percent of the entire US annual budget over the past few years. This is a necessary step forward as collaborations between NASA and private corporations become more and more frequent. We can expect to witness astronauts manning these spacecraft into lower Earth orbit as early as 2017, if all goes according to plan.

Boeing's $4.2 billion contract with NASA came as little surprise. Boeing has already received several hundred million dollars in funding from NASA to work on their space shuttle over the past few years. As one of the world's largest aerospace companies, Boeing has manufactured parts for NASA for the past several decades, as well as been part of the construction of the International Space Station. Boeing's space shuttle is called CST-100, or Crew Space Transportation, and has been in development in collaboration with Bigelow Aerospace. The shuttle has a seven passenger capacity and an estimated 60 hours of flight time, equating to 210 days in space when docked. Boeing's design is considered to be the safer of the two choices by NASA, being similar to that of older NASA spacecraft in exterior appearance and the use of airbags and parachutes to perform landings. The CST-100 will be able to use the Atlas V, Delta IV, and Falcon 9 rockets for launch. Overall the CST-100 has been noted to be similar to the NASA space shuttle, Orion, set to be complete around 2020. The CST-100 shuttle is expected to be operational by 2015.

The SpaceX contract was awarded at a value of $1.6 billion. In 2012, SpaceX launched their Dragon spacecraft to deliver much-needed cargo to the astronauts stationed at the ISS. This was the first ever mission to involve the use of a commercial spacecraft to carry cargo to the ISS. The Dragon V2 shuttle is certainly the more innovative and risky of the two designs chosen by NASA. Where the CST-100 shuttle uses conventional landing methods, the Dragon V2 will do away with this completely over time in favor of propulsive landing with very high accuracy. However, in the early stages, parachutes will assist in the landing process. In addition, Dragon V2 will be a fully reusable spacecraft. The Dragon V2 will have a seven passenger capacity, and will have a potential of up to 1 week of flight time and 2 years of docking time. The shuttle will be launched with the Falcon 9 rocket and is expected to be completed in 2016. Both Boeing's and SpaceX's space shuttles will be good for ten space flights.

A third company, Sierra Nevada Corporation, lost out on the contract deal with NASA, but is still a part of the Commercial Crew Program. Their proposed space shuttle, Dream Chaser, also possessed an innovative design, being a winged spacecraft capable of flight in low earth orbit.

Staying in the Black: Money Tips for University

RAEESA ASHIQUE
1A ELECTRICAL

In high school, I was the one with the cheap LG phone on a $13/month plan, because my mom had pounced on this limited time back-to-school promotion from "Robbers" Wireless several years ago. I was the one who went out for lunch with my friends, only to sit in the food court eating my slapped-together, quite dry and tasteless turkey sandwich. I was the one who mooched off of everyone else, because my friends got fed up with my cheapness. I was the one who would only run the car for a couple minutes in the morning (keep in mind, we're talking Saskatchewan winters here) because I hated spending more on gas than necessary. So trust me when I say, I know how to save money.

It was the summer after graduation, especially by August when student fees were due, that I began to realize I couldn't complain anymore about being broke. University is extremely expensive, so everyone is broke. We're all in this together. However, there are ways to maximize our account balance, which fall under two main categories: don't spend, or save your earnings.

First of all, create a budget. You know what works for you, so give yourself a weekly quota of money to spend on necessities, and a certain amount for extra items. This amount completely depends on the person. If you know that you will end up shopping or seeing a movie in your multitude of free time, make sure you factor in this amount. Once you create a budget, stick to it. Review your budget every week, and make sure to hold onto all receipts. I know most of us won't keep a bill for fast food, but it will help keep track of your spendings.

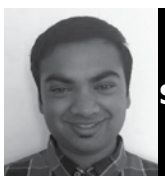
The simplest way to avoid overspending is to use cash. With debit, credit, and WAT cards, spending is easy, because the piece of plastic has no inherent value. Entering a pin is so second nature that we give it no thought. Cash is different. We've all said "I think I have change, I don't want to break a twenty". A twenty dollar bill makes us feel rich, and it hurts to part with it. You'll think twice next time you're about to purchase an unnecessary item if you are paying with cash. It's not as easy to whip out a wad of bills than a debit or credit card. Not that students have wads of cash. But I've found that taking out cash monthly definitely reduces my spending habits.

I am a strong proponent of water fountains. Think about it: you're saving money and the environment all at once. When I fill up my water bottle after buying lunch, I have a feeling of accomplishment watching the count of plastic water bottles saved increase by one. If you think that water is somehow tainted, then that is all psychological. Even in high school when the water fountains weren't particularly appetizing, I still refused to buy water. This doesn't sound like a big deal, but it'll add up when you're buying overpriced water that is free from the water fountain (or even just the sink), not to mention adding one more plastic bottle to a landfill. If you invest in a reusable water bottle, it will quickly pay itself off.

If you are in school right now, then you likely are not working. However, keep this next tip in mind for your co-op semester, because I speak from experience. In high school, despite complaining about being "broke", I was also the one working twenty to twenty-five hours a week in order to save up for school, which was significantly more than any of my friends were, and I was saving rather than spending it. Since I started working, every few months I would invest majority of my paycheques, which is beneficial in several ways. Primarily, it makes you feel broke because your account balance is low, which make you hesitant to spend. In addition, this money will grow without any additional work on your part. Alternatively, you could open a savings account separate from your regular chequing account and transfer money into it from each paycheque. As long as you know this money is not available to be spent, you will find it easier to save.

And finally, financial aid. I am the last person who likes to admit this, but I should've listened to my parents. My rebellious side made me take extra hours at work just because they told me to work less. They repeatedly urged me to look into scholarships, awards, bursaries, etc. but I procrastinated and soon was so busy with school that I only ended up completing a handful of applications. I hate to admit it, but my dad was right. He said a few hours spent applying for scholarships was time better spent than working as a cashier. If successful, I could've made a $1000 an hour at that time, rather than $10. It's never too late, so continue to look into scholarships to help pay your tuition. Who can say no to free money?

One Columbia: Unfinished and Unresponsive



NARTHAANAN SRIMURUGATHASAN
1A GEOLOGICAL

A large number of University of Waterloo students faced a rather shocking phone call on September 1, 2014. The construction of One Columbia, a 22-story luxury apartment building for student housing, had been delayed until further notice. With three days left until the anticipated move-in day and about a week until classes were to begin, many students and their families alike were confounded with the unexpected notification by Schembri Property Management. Schembri Property Management later blamed the contractor for not being able to get appropriate labour on the site, thus causing delays in the construction. In a more recent update, the company reassures that they have forced subcontractors to bring extra labour to speed up the remaining work to be done. Such a labour shortage should have been foreseen weeks in advance so that the company could have increased the labour, thus speeding the construction process.

It was not long ago that the company had listed their luxury high rise for lease starting from Fall 2014. Each suite was to be fully furnished, consisting of 5 rooms with a private ensuite washroom. The suite was to be equipped with high end appliances and fixtures, and also included utilities like unlimited internet usage. Many indoor and outdoor recreation facilities were to be included for student use. Many students, therefore, eagerly signed up for this luxury lifestyle for a mere $655-$730 per room per month.

Upon notifying tenants of the construction delays, Schembri Property Management offered a few alternatives for the tenants while the construction finished. The company, which provides off-campus housing to students in the Waterloo and Oshawa regions, offered to transfer the leases to their other properties, pay pro-rated rent based on delayed occupancy or place the would-be residents in a hotel, paid for by the company. The alternatives, however, did not appeal to most students; they were displeased with the management and wished to terminate their leases. Students are spending countless hours writing letters and emails, and making phone calls to the company demanding for their deposits. Schembri Property Management failed to address this as an option and has yet to provide students with an answer to their requests. In fact, they neither reply to calls nor written letters, providing only occasional vague descriptions of the state of construction.

In order to maximize their options, many families have analyzed their lease and its conditions. As per the Ontario Residential Tenants Act, 2006, Rent deposit, Prospective tenant 107, "A landlord shall repay the amount received as a rent deposit in respect of a rental unit if vacant possession of the rental unit is not given to the prospective tenant. 2006, c. 17, s. 107." However, students and their families who raise such claims are given no response by Schembri Property Management. Due to the rising concern of students and their unstable accommodation situation, the Waterloo Public Interest Research Group (WPIRG) organized and led a march to the Schembri Property Management office on Friday September 19, 2014. Although the developer, Gordon Schembri, was not there, the students believe the commotion they caused ought to get more attention on the situation. The company has yet to release any statements regarding termination of leases or the student march and their demands

Surprisingly, this is not the first such experience for Schembri Property Management. It is reported that the company had earlier deceived tenants with luxury housing on online photos but presented them with an old and torn house for the first half of their contracts. The company then consciously gave up control of the building to another housing management company without notifying the tenants. Furthermore, an online business review website reports a complaint against the company, dated 2013, for failure to resolve complaint issues. The same business review website provides complaint-free profiles of other Waterloo property management companies like Hoffaco Property Management and In8 Developments.

With the current state of construction, it is unlikely that the project is going to be done until October or November at the earliest. It is in the best interest of students to sign a new lease contract, regardless of whether the Columbia One lease has been terminated or not. Many students refrain from signing a new lease due to the possible financial burden of paying for two leases. The Ontario Residential Tenancies Act, however, clearly states that they are not obligated to rent the property and therefore students can raise the issue again when the contractor has completed the project.

An In Depth Look At the Franklin Expedition

BRYAN MAILLOUX
1A TRON

On September 7th, Prime Minister Harper announced the discovery of one of the two ships of the famed Franklin Expedition, lost at sea more than 150 years ago. Since then, the team of Parks Canada archaeologists who found the wreck have made their first dive down into the depths to discover which of Franklin's ships they have found: the Erebus or the Terror. The Canadian government has been very quick with its press releases, since the discovery could tip the scales when it comes to affirming Canada's sovereignty over Arctic waters.

So essentially, if you haven't yet heard of this story, it's probably because you live under the sea yourself. If you're like most other people, however, and have some vague idea about some ship someone found in the Arctic, never fear: the Iron Warrior is here to elucidate the story of the Expedition and its recent discovery.

Back in the good ol' days of Victorian England (basically all the 1800s), there was an obsession to find the fabled "Northwest Passage", a theoretical passage that ran north of Canada that would link the Atlantic and Pacific Oceans and make trading with Asia much more cost-effective. The Admiralty sent Sir John Franklin, a 45-year naval veteran as well as a three time Arctic explorer, to find the Passage. He didn't have the greatest track record – on his first expedition to Canada more than half of his men died of starvation and the rest of his party resorted to trying to eat their boots – and he was chosen mostly because all the first choices of the Admiralty politely refused.

The Erebus and the Terror set sail in May 1845, and though the expedition was well-provisioned, it is clear that things eventually went wrong. However, clues as to what actually happened are hard to come by. Since 1848, explorers and archaeologists have found artifacts including a note saying that Franklin had died in June 1847 and that the remaining 105 men would try to head south, the graves of three crew members who had died early on, whose bones exhibited signs of lead poisoning, and later more bones with knife cut-marks on them, meaning that the men probably had resorted to cannibalism.

However, the find of the shipwreck could be the most telling. To find the wreck, the archaeologists relied on a combination of high-tech robots, archaeological techniques, environmental knowledge such as the science of ice formation (headed by a Waterloo Environment alumnus, Thomas Zagon), and more than a little luck. (The team of archaeologists is made up of alumni from many Canadian universities, and even Laurier has managed to pull its own weight – the name of the research vessel is the CCGS Sir Wilfrid Laurier!)

As opposed to PM Harper's geopolitical designs on the Arctic, the academic community is excited because the wreck will definitely provide more clues about the Expedition's last days. The team even thinks they might find the intact Captain's Log, since the frigid Arctic water could have preserved it perfectly. Whatever they find down there, it is sure to keep the media occupied for quite some time.

Blackberry Stirs with Purchase of Startup

VINCENT MAGAS
2A MANAGEMENT

The struggling mobile company Blackberry recently took possession of U.K. based start-up Movirtu. The start-up is the maker of technology that allows smartphones to use multiple phone numbers simultaneously with the use of only one SIM.

The acquisition of this start-up and subsequent technology could give the troubled mobile company the ability to expand its capability. This could give Blackberry its much needed edge in the ever-evolving market.

Movirtu's multi-number, virtual SIM technology may help Blackberry cater to their core base of corporate and government clients. The technology eliminates the need for separate work and personal mobile devices or SIM cards. An individual may have both their personal and business numbers on a single device.

The technology is said to support separate billing for voice, data and messaging usage per number, drawing a fine line between personal and business usage for the phone. John Sims of Blackberry also confirmed that Movirtu's technology would allow IT administrators the capability to restrict and control e-mail access to the work phone number, without compromising access to personal calls and e-mails to the personal number.

During a press-release, Blackberry had stated that Movirtu's technology will work hand-in-hand with Blackberry's own partitioning and security systems such as Secure Work Space and Blackberry Balance. Movirtu, which holds patents for its Virtual SIM Platform allows Blackberry to further improve the technology.

Amongst other recent changes, Blackberry has moved to stabilize itself through other small acquisitions, selling assets, and attempts to reduce costs in their manufacturing and supply chain. Such changes are close to home, with the sale of the Blackberry's buildings to the University of Waterloo this past year.

The acquisition of Movirtu, and the recent shift in Blackberry activities stems from Blackberry's current Interim CEO John Chen. Turnaround artist John Chen, known for saving Sybase in 1990s, is now attempting to reverse Blackberry's downward spiral.

Blackberry's future remains uncertain, but these recent moves suggest, at the very least, a commitment to change and revival that has not been seen for a very long time. Hopefully, this signifies a new, more positive era for the struggling former tech giant.

Residents of One Columbia March in Frustration

FILZAH NASIR
3N ENVIRONMENTAL

On the afternoon of Friday, September 19th, over 50 frustrated residents of 1 Columbia, marched alongside supporters to the office of Schembri Property Management. The students were there to hand deliver letters stating that the construction delays which prevented them from moving in to their apartments were a breach of contract and they were choosing to terminate their leases with Schembri.

One by one the students piled in the Schembri office, taking up all the available space, with supporters lining the hallway. Alex Diceanu, a staff member at the Waterloo Public Interest Research Group (WPIRG) who helped students organize the march spoke first. He announced that the students were terminating their leases and that they expected a return of their deposits within 3 business days or they would take further action. He was interrupted several times by Schembri employees who insisted that students leave the office. One by one, the students piled their letters on the desk and marched out of the building to a sea of applause from supporters.

After the march, the group gathered on the sidewalk outside the building to take pictures and talk to media. Police later arrived on the scene and asked the group to stay off Schembri property.

"I think they got the message this time," said Geetha Gnana, who took a day off work to join her son, Arjun for the march. Her son, is among the 300 students who have lost out on deposits due to the construction delays. Shrutika Sainani, a second-year student in Geological Engineering said that she and her roommate had place a deposit of $1450 which included first and last month's rent, guarantor's cheque and key deposit. She was informed of the construction delays while she was not in Canada, three days before she planned to move in. At the time she was not offered any information on alternative arrangements and therefore chose to sign another lease. While $1450 is the average deposit amount students placed with Schembri, some international students made five-month deposits of around $3000.

While in previous statements to the press, Schembri has claimed that they are disappointed that the delays have let down future tenants, it is hard for students to take them at their word because they have yet to release a possible move-in date or offered to return deposits to students wishing to terminate leases. Some students who chose alternative accommodations were forced to stay in a hotel in Guelph due to hotels in Kitchener-Waterloo being pre-booked.

The naturally frustrated students are aware that it is unlikely Schembri will meet the deadline they have set and are prepared to take further action. This includes filing claims with the Landlord and Tenant Board as well as a public campaign against the company. Diceanu says, he alongside WPIRG will be supporting students with filing the claims and they're determined to help students win back the deposits. Diceanu says that with midterms coming up soon, students shouldn't have to be stressed out about this. He hopes other student organizations will also become involved.

1 Columbia is an egregious example of what is actually common occurrence in KW. The growing population and the low vacancy rates in the region make finding housing difficult. Students, who have little to no experience being tenants, can often become prime targets for companies such as Schembri who can take advantage of tenants who are unaware of their rights. The Kitchener-Waterloo Solidarity Network, which helped the students with the march on Friday, is a community organization that helps people in the KW region facing similar situations related to tenant issues.

For the residents of 1 Columbia, Friday was just the first step. Many of them are determined to win their deposits back and they are prepared to continue to campaign as an organized group for their rights in the hope that they can bring justice to the over 300 students who have been unfairly affected by this issue.

Filzah Nazir

Students Protest at the Schembri head office

A New Beginning!

LEILA MEEMA-COLEMAN
PRESIDENT

Welcome and welcome back! For those of you I have not had the pleasure of meeting yet my name is Leila and I am the Engineering Society President this term. I am just starting my 3B term in mechanical engineering and I am so excited to finally be back on term and to implement all of the great new initiatives myself and the rest of the Society leadership team have been working on.

One of the largest changes I have been working to implement is improving the communication with and engagement of you the members. We want to include you as much as possible in the shaping of your Engineering Society and to make sure that you have you are informed of everything we currently do! Some of the new things we have added this term are a formal member engagement strategy for Executive and commissioners, Executive "orifice hours", Exec in the foyer question period, a new website, the Everything EngSoc poster board, President class visits, and so much more!

Some more changes that came out this summer were the implementation of an Engineering Society Board of Directors and General Meetings. The Board will work with the Executive to increase accountability and improve consistency across terms. General Meetings are the opportunity for every fee paying member to have a say in the direction of the Society. Every member has a vote and are encouraged to submit motions beforehand and vote at the meeting!

As an Executive we are committed to increasing the inclusivity of the Engineering Society and have been working with all of our directors and commissioners to make every event and service as easily accessible as possible. We want to make sure that if you have ideas, want to get involved, want to come to an event, or use a service you feel comfortable and welcomed doing so!

If you have any questions about anything in this article, questions about the Society, want to find out more about what we do, or just want to talk please do not hesitate to visit me in the orifice. You can also send me an e-mail at *president.a@engsoc.uwaterloo.ca* and I would be more than happy to help however I can. Thanks and I look forward to hearing from you!

Notice of Engineering Society General Meeting

The Engineering Society General Meeting for the term will be held on October 8th at 5:30 PM in CPH 3607. Every engineering student who has paid an EngSoc fee has a vote.This is your chance to have your say in the Society and how you are being represented. Please direct any questions to president.a@engsoc.uwaterloo.ca

Workshops

PUNEET NATT
VP INTERNAL

Hi everyone!

If we haven't met yet, my name is Puneet Natt and I am the Vice President Internal for the Engineering Society this term. My role within the Engineering Society is to help run many of the social events, academic services and first year mentoring initiatives.

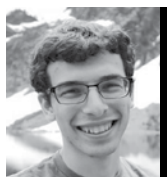
One of my goals as VP Internal is to expand and incorporate more workshops catered to student needs. Resume Critiques was the first workshop, which ran during the first two weeks of school and had a fantastic turnout. We are working on having this as an ongoing service throughout the term where students will be able to book appointments in order to have their resumes critiqued during the continuous rounds of Jobmine. There have also been workshops added this term that work to enhance skills for academic and/or co-op purposes. The new workshop topics added this term are SolidWorks, AutoCAD, Programming and Jobmine. These workshops were created due to student interest and I am hopeful that they will be beneficial to undergraduate engineering students. The Jobmine workshop was specifically added for first year students in order to help them navigate around the Jobmine workshop and apply to their first round of jobs.

Expanding the first year portfolio was also one of my goals for this term. I have been working closely with the First Year Commissioner, Ray Zhao, and the First Year directors in order to expand the mentorship program, host a conference specific to first years and start a first year newsletter. The mentorship program has been designed this term to include events targeted to helping students develop some soft skills while having fun and meeting other first years and upper years. Another way the Engineering Society is helping first years is by hosting the first ever First Year Conference. This conference will be hosted at the university and will work to develop the professional and leadership skills of first year engineering students. In order to stay in touch with all of the first year events happening this term, I would encourage you to sign up for the first year newsletter at: http://bit.ly/newsletterfirstyear. This newsletter will include all the information about first year events along with tips and tricks to help first years transition to university life.

I am very excited for my first on-term as VP Internal and cannot wait to meet so many of you! If you have any suggestions for things you think I can improve on or suggestions for any of the events and services, feel free to email me at *vpinternal.a@engsoc.uwaterloo.ca* or stop by the Orifice (CPH 1327).

How do pigs get to the hospital? In a hambulance!

Exciting New Initiatives!



JOSHUA KALPIN
VP EDUCATION

Hello everyone and welcome to a brand new term! My name is Josh and I'm your VP Education for the Engineering Society this term. I'm in 3B Software Engineering and I'm thrilled to be representing all of you on educational issues this term. Since this is my first exec update this term, I wanted to take some time to go over what I've been working on and my goals for this upcoming term.

This summer my focus was around two key initiatives, an Engineering Career Fair and Course Critiques. The career fair, known as EngFair, is the first career fair that the engineering society has ever run. Over the summer, I worked with my three awesome directors to sort out the logistics around this awesome event designed to help you find a job. EngFair will be taking place on November 4th and look forward to a lot more news as we announce employers and more details in the weeks to come.

Course critiques have always been dear to me as they are the most effective way to improve teaching quality within the Engineering faculty. During the summer I spoke with Professor Gordon Stubley, the Associate Dean of Teaching, to discuss how the society can contribute to teaching excellence within the faculty. From these talks I've made a concerted effort to increase the awareness of the course critiques results and increase awareness for the faculty wide teaching award. This term we'll be actively advertising the link to the course critique results (*eng.uwaterloo.ca/critiques*) and look out for more information on the new EngSoc Teaching Award in the coming weeks.

My main job as VP Education is to advocate for the engineering student body on academic related issues within the faculty and university wide. This term I'm going to be focusing on a few key issues that could have a large effect on engineering students. First, I want to ensure that engineering students have a full say in the discussions about the fall reading break within the faculty and FedS. Second, this is expected to be the final year that students will have to take the ELPE. I want to ensure that any replacement will not make engineering student's academic lives any more difficult.

I just want to re-iterate that my job is to represent all of you on all academic issues that are facing engineering students. So if there is anything you are concerned about with your classes, co-op, exams, or even if you just want to talk, my office hours are from 2:45 to 3:45 Tuesdays and Thursdays in the Orifice (CPH 1327) or you can reach me via my email (*vpeducation.a@engsoc.uwaterloo.ca*). I'm super excited to working with everyone and I wish everyone the best of luck this fall term.

Upcoming Events Calendar

Wednesday September 24	Thursday September 25	Friday September 26	Saturday September 27	Sunday September 28	Monday September 29	Tuesday September 30
Charity Pancakes 8:15-10:30 am, CPH Foyer	Interview Skills Workshop 5:30pm-7:00 pm	Sleepover in POETS 7:00pm			Charity Grilled Cheese 11:30 am-1:30pm	Post-Secret Week 11:30am-1:30pm, CPH Foyer
Coverall Day! 11:30am-1:30 am, CPH Foyer	Coverall Day! 11:30am-1:30 am, CPH Foyer	2018 Spirit - Social 7:00pm-10:00pm			Post-Secret Week 11:30am-1:30pm, CPH Foyer	Iron Warrior Meeting 5:30pm - 6:30pm, E2 2347
Speed-Meeting 7 pm-9pm, location TBA	WiE: Art Attack 6:00pm - 8:00pm, CPH Foyer				AutoCAD Workshop 5:30pm-7:30pm	Colouring Contest 4:30pm-5:00pm
2017 Spirit - Campfire! 8:30 pm-10:30pm, CIF	French Movie Night 7:30pm-10:00pm, POETS					Exchange 101 5:30pm-7:30pm
	Engineering Athletics 7:30pm-9:00pm, PAC Weight Room					BYOBowl - First Year Mentoring 7:30pm-9:00pm
	WiE Campfire 8:00pm-10:00pm, CIF					
Wednesday October 1	**Thursday October 2**	**Friday October 3**	**Saturday October 4**	**Sunday October 5**	**Monday October 6**	**Tuesday October 7**
Charity Pancakes 8:15-10:30 am, CPH Foyer	Post-Secret Week 11:30am-1:30pm, CPH Foyer	Post-Secret Week 11:30am-1:30pm, CPH Foyer	EngSoc goes to TheMuseum! 9:00am - 3:00pm		Charity Grilled Cheese 11:30 am-1:30pm	Thanksgiving Photo Contest
Post-Secret Week 11:30am-1:30pm, CPH Foyer	TalEng 7:00pm-12:00am, POETS		What's Next Conference 11:00am - 7:00pm		Engineering Athletics 7:30pm-9:00pm, CPH Foyer	De-Stress Workshop 11:30am - 1:30pm, POETS
EngSoc Meeting #2 5:30pm-7:30pm, CPH 3607	Engineering Athletics 7:30pm-9:00pm, CPH Foyer					Iron Warrior Meeting 5:30pm - 6:30pm, E2 2347
						Coffee House 8:00pm - 11:00pm, Bomber

Check out up-to-the-day event postings on the EngSoc website at engsoc.uwaterloo.ca

Budget and Covies!

KEVIN MCNAMARA
VP FINANCE

Hello A-Society! My name is Kevin McNamara and I am the Vice-President Finance of the Engineering Society. I hope that those of you returning from co-op had a great summer, and those doing 8 months of school are excited to still be here. Welcome to all of the first year students! I hope to use these updates to keep everyone informed on what is happening from the financial side of the Society, and all other things related to my portfolio.

The EngSoc budget for the term, which can be found on this page, was passed at our council meeting this past Wednesday. This budget is used to fund all of our operations for the term, including all events and services that we run, as well as running the EngSoc Office (the Orifice, CPH 1327) and many other initiatives. Every student pays a $15.22 EngSoc fee, which is what makes up the bulk of the income in the budget.

I have been working on a number of goals and initiatives over the co-op term that I plan to continue with this Fall. Firstly, I have been working with our directors to try to improve our budgeting process and make sure that they have the support that they need. Moving forward, I plan to better establish budgeting rules, and make use of past trends to increase consistency from term to term. I will also be working with the Engineering Capital Improvements Fund (ECIF) Committee to improve the turnout of student submissions, and make sure that students are aware of what the fund is for. In addition, I plan to try and open up better communication between EngSoc and student teams and groups on campus to try and improve the EngSoc sponsorship process.

Another goal that I have for this term is to improve the merchandise that can be found in Novelties. Novelties is our engineering swag shop, which can be found in CPH Foyer just to the left of POETS. The store is open from 11:30 to 1:30 during the week. Feel free to stop by some time on your lunch and see what the store has to offer, from sweaters and scarves to glassware and belt buckles, and much more. If you have any suggestions for new swag, let me know!

Coverall Day(s) are coming up! Have you seen the awesome Engineering Coveralls and want your own pair? Then be sure to come out to CPH Foyer on September 24th and 25th from 11:30am -1:30pm to order your very own pair. Coveralls will be $90 this term, which will get you a pair of coveralls, two lines of text embroidery on the arm, and your very first patch to sew on.

That's about it for this issue! If you have any questions about anything finance or EngSoc related, feel free to send me an email to *vpfinance.a@engsoc.uwaterloo.ca* or stop by the Orifice (CPH 1327) and

FALL in Love with External Initiatives!

HEATHER SMITH
VP EXTERNAL

Hey Friends! This is your friendly neighborhood VP External, Heather Smith. If you are wondering what a VP External does and what I plan to do with this role, then sit down, get cozy and continue reading!

The Fall term is busy for engineering students involved in councils on provincial and national levels. These councils are the Engineering Student Societies' Council of Ontario (ESSCO) and the Canadian Federation of Engineering Students (CFES). Both these organizations are concerned with best practices in the interest of the engineering student body across Ontario and across Canada. The VP External represents and voices the opinions of Waterloo Engineering students to ESSCO and CFES. You can get involved with ESSCO and CFES through various events such as National Engineering Month, Math and Physics Day at Canada's Wonderland, Ontario Engineering Competition, and Canadian Engineering Competition. In addition to these events, both ESSCO and CFES run conferences year round for engineering students. Conferences that are open to all undergraduate engineering students in the Fall term are the National Conference on Women in Engineering and the Professional Engineers Ontario Student Conference. Also, keep your eyes open for application information this Fall term on CFES Congress and the First Year Integration Conference, which will take place in the Winter.

The VP External also works with Professional Engineers Ontario (PEO) to bring career development opportunities to EngSoc! One way I plan to do this is by organizing a panel of speakers from PEO to answer your questions on career development and provide insight on what you can do with your engineering degree. Details on this event will be sent out through the EngSoc mailing list and advertised at EngSoc meetings!

In addition, the VP External plays an active role in charities and community outreach initiatives. EngSoc members had the chance over the Spring 2014 term to nominate and vote on the organization towards which funds raised through 3 consecutive terms of charities initiatives would be donated. The charity that was selected is Reaching Our Outdoor Friends (ROOF)! So the money you spend buying pancakes and grilled cheese in the CPH foyer, the money you donate purpling yourself at Purplepalooza, taking pictures with Santa and the Tool, and at Change4Change Week will be going towards providing at-risk youth in the Waterloo Region with safety and support, and improving their overall well-being. Visit http://www.roof-agency.net/ for more information on ROOF's initiatives and volunteer opportunities.

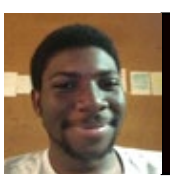
Another role of the VP External is working towards EngSoc having a stronger presence in the Kitchener-Waterloo Community. Education Outreach is an event where EngSoc goes to THEMUSEUM in Kitchener to get kids excited about science and engineering by performing science experiments with them. Engineering students can also march in the Santa Claus parade, volunteer their services through various opportunities from Engineering A Difference, or partake in an environmental clean-up!

If you would like more information or want to learn more about how to get involved in conferences, outreach or charity, send me an email at *vpexternal.a@engsoc.uwaterloo.ca* or come talk to me in the Engineering Society Office!

Fall 2014 Budget

Revenues	
	Budgeted
Student Fees	$ 64,213.18
Orifice Sales	$ 1,400.00
Total Revenues	**$ 65,613.18**
Expenses	
Fixed Costs	**Budgeted**
Payroll/Operations	$ 25,310.00
Orientation Week	$ 2,000.00
Misc. Expenses	$ 2,568.53
Sponsorship	$ 9,631.98
Engineering Capital Improvements Fund	$ 9,631.98
Iron Warrior	$ 642.13
Total Fixed Costs	**$ 49,784.61**
Executive Discretionary	**Budgeted**
Executive	$ 2,000.00
President	$ 1,000.00
VP-Finance	$ 100.00
Total Executive Discretionary	**$ 3,100.00**
President	**Budgeted**
Advertising	$ 250.00
CRO - Referendum	$ 300.00
Engagement and Communication	$ 300.00
Food	$ 2,500.00
Orifice Trick or Treating	$ 50.00
P**5	$ 855.00
Total President	**$ 4,255.00**
Vice-President Education	**Budgeted**
Career Fair	$ (950.00)
Total Vice-President Education	**$ (950.00)**
Vice-President External	**Budgeted**
Alumni Speaker Panel	$ 360.00
Archineering	$ 200.00
Charities	$ 49.00
Engineering a Difference	$ 225.00
Environmental	$ 140.00
PEO Representative	$ 10.00
Education Outreach	$ 75.00
Santa Claus Parade	$ 853.43
Women in Engineering	$ 100.00
WEC	$ 2,380.00
Total Vice-President External	**$ 4,392.43**
Vice-President Internal	
Student Services	**Budgeted**
Mental Health Awareness Puppies	$ 56.00
Mental Health Awareness	$ 71.70
Resume Critiques	$ 790.00
AutoCAD Workshop	$ 48.00
Solidworks Workshop	$ 20.00
Interview Skills Workshop	$ 120.00
Total Student Services	**$ 1,105.70**
Student Life	**Budgeted**
Arts	$ 127.00
Carebear	$ 450.00
Coffee House	$ 75.00
EngPlay	$ -
Exchange	$ 435.00
French Movie Night	$ 15.00
Genius Bowl	$ 350.00
Halloween	$ 50.00
Hackathon	$ 380.00
Hockey Night in POETS	$ 72.00
Jazz Band	$ -
LAN Party	$ 46.00
Quidditch	$ 30.00
Semi-Formal	$ -
Sleepover in POETS	$ 40.00
Speed Meeting	$ 75.00
TalEng	$ 115.85
Year Spirit 2015	$ 125.00
Year Spirit 2016	$ 125.00
Year Spirit 2017	$ 125.00
Year Spirit 2018	$ 125.00
Year Spirit 2019	$ 125.00
Total Student Life	**$ 2,885.85**
First Year	**Budgeted**
First Year Mentoring	$ 960.00
Total First Year	**$ 960.00**
Total Vice-President Internal	**$ 4,951.55**
Vice-President Finance	**Budgeted**
POETS	$ 795.00
RidgidWare	$ 265.00
Total Vice-President Finance	**$ 1,060.00**
Total Expenses	**$ 66,593.59**
Net Total	**$ (980.41)**

University: Understanding the Journey



EMMANUEL UTUAMA
2N ELECTRICAL

Congratulations and welcome to the University of Waterloo Class of 2019. The great odyssey of becoming an engineer has begun. As with any journey, the first steps are often the hardest, this is especially true for first year engineering. This series of articles is aimed at understanding what it means to be in university, how to survive your first year, and how to seize the numerous opportunities that university has in store.

First of all, what does it mean to be in university? The answer is self-development achieved through dedication and hard work. At university, you are given the tools and opportunities to redefine yourself and pursue your life goals through academic work and a wide range of extra-curricular activities. Every moment you are here, think about how you can create the best version of yourself.

More specifically, what does it mean to be in engineering at the University of Waterloo? The engineering program offered here focuses on academic excellence as well as exposing young engineers to the challenges of job hunting and working in the industry through the co-op program. Every academic term you will be faced with the challenge of getting good grades while navigating the subtle art of finding a job placement. These two activities are largely interconnected and are very important on your journey to completing your engineering studies. (I will discuss this more in my next article; focusing on getting a job for your co-op term.)

Juggling academics and job-hunting for the first time is probably the most difficult thing that a first year student in this program will have to do. However, don't get too stressed or worked up thinking about it. It has been done before and can be done very successfully if you keep a few tips and tricks in mind. First of all, there are tons of excellent resources available to help you survive any course. Second, the most important and effective resources you have as an engineering frosh are your WEEF TAs. The best advice I received while I was in first year was "get to know your WEEF TAs; they will help you out the most during your first year." Your WEEF TAs are there to help guide you academically whatever other issues you are facing – provided that they are reasonable. They are very friendly, open and supportive people, so get to know them.

If you're looking for advice on how to plan and organize yourself for university, you can see the First Year Engineering Office in Carl Pollock Hall (CPH) 1320. Prof Ajoy Opal, Prof Bill Owen and many other professors at the First Year Engineering Office are more than ready to help. Another highly effective resource are your professors and TAs. Be sure to learn their office hours so that you can go to them for help. Going to office hours is a really amazing way to learn class material, get tips on what material to study for exams, find ideas on how to solve assignments and projects, and generally get to know your professor and teaching assistants. They always have great advice and support for those students who are willing to ask for it.

Another pro-tip to help reduce the stress of studying during midterms and finals is to always study class material, practice assignments, and old past questions ahead of time during the weekends or whenever you're

New School Photography

free during the academic term. Trust me, you'll be happy you put in the effort ahead of time. The engineering society (ENGSOC) also has an online exam bank where there are loads of past midterms and finals. All you need to do to access the exam bank is to go to the EngSoc website and log in with your Quest credentials. Studying for final exams is hard, even for the best engineering students. Be prepared.

Finally, keep calm and always stay positive in any situation you find yourself. This is the real challenge of your first year in engineering. There is so much work and such little time that the stress is bound to get the better of you once in a while. Remember that complaining or feeling stressed will not solve your problems; moving forward with courage and perseverance will.

And now, some survival tips for co-op. First tip: when applying on JobMine, always use as many applications as you can during the first round. You won't get any jobs you don't apply for… Duh… Second tip: when applying for jobs, try your best to have a working cover letter. Believe me when I say a strong cover letter can drastically increase your chances of getting an interview. Writing a good cover letter is just as challenging as crafting a strong résumé. It's not easy, but if you can pull it off, you will see amazing results. Go to résumé critiques. The EngSoc critiques are very good. You get insight into what employers are looking for and how to showcase what makes you unique. The Centre for Career Action (CECA), located in the Tatham Centre, is another great place to get co-op advice and résumé critiques. If you don't have a lot of time, you can go for the 10-15 minute drop-in resume and cover letter critique sessions. Ultimately, a résumé is an extension of who you are. There are different employers, each of whom are looking for different things. So don't get too stressed out on trying to make the "perfect résumé". And, if you're still unsure, ask a fellow engineering student or engineer. Engineers train engineers; they know what qualities and skills they are looking for when hiring.

Apart from studying hard to get awesome grades, networking, and updating your résumé to find a job, it is very important to get a chance to relax and find a fun extra-curricular activity to be engaged in. The university has a wide range of activities including entrepreneurial, science, arts, and engineering clubs, sports teams, hackathons, and engineering design teams. Extra-curricular activities and clubs are an amazing way to socialize, network and develop valuable skills that you may not be able to nurture elsewhere. It is very easy to believe, especially as an engineering student, that having good grades and a strong co-op experience will get you the job of your dreams after graduation. However, this mentality can be limiting. You can only learn so much at school and from your co-op placements. What are you passionate about? What excites you? Extra-curricular activities help a lot in giving you that extra edge or unique skill-set that will set you apart in the eyes of an employer (and they're a lot of fun). Furthermore, employers and hiring managers are people just like you who like to play in bands, read and write, make computer programs for fun, and play sports. Having a common interest with an interviewer breaks down the formality of the hiring process and gives you an opportunity to have a real conversation. Find at least one extra-curricular activity that you can be passionate about.

Finally, your first year of university is the first step in a very challenging, but truly rewarding journey. It can be difficult adapting to a new environment, dealing with challenges and trying to achieve goals. It can be a lot to balance but like my aunt would often say, "he who wants a lot must work a lot". I have one final tip. Enjoy the journey; you didn't come to university to just survive. You came to thrive.

New Apple Products

SUNG EUN KIM
MASC., ELECTRICAL AND COMPUTER

The past week, I felt like reading a smartphone tech forum or something when I opened Facebook. A lot of people seemed to have a deep insight into the design trend of Apple's products, and a lot of them were not afraid to publish their opinions on the web in many different manners. I'm sure you have one too.

The first iPhone came out in 2007. If you remember, there were all-night lineups at local stores. I personally think the waiting reached its worst when the white iPhone 4 came out and quickly ran out of stock. The frenzy is evident in the numbers. In 2012, Apple had the best quarterly earning in history by gaining more than 50% of their revenue from the sale of iPhone 4S, which kept its selling point quite steady throughout its market lifespan. This made the iPhone Apple's most crucial product among the many they produce, at least from a revenue perspective.

Unlike many other rivalry smartphone companies, Apple has been producing just one design to win the race in the smartphone industry and it's been undoubtedly successful. This year, again in September, we are surprised by delivery of *three* products announced at once – iPhone 6, iPhone 6 Plus and Apple Watch. As of today, over four million orders have been placed for the iPhone 6 and iPhone 6 Plus within the first day of launch in stores. Records show that the iPhone 5 sold 91 million units in total and 2 million pre-orders. iPhone 5 sale took 2 months to reach the 5 million mark. While records in the millions may not seem all that implausible anymore, it is worthwhile to note that these two brother phones still beat all sorts of predictions and statistical records by far.

Currently, iPhone 6 and iPhone 6 Plus are both out of stock in most places and the wait time for re-stock is about a week – so don't wait outside. Both phones provide is an overall improvement from the previous iPhone's features: thinner (the thinnest so far), longer battery life, better camera, etc. Both have prominent antenna bands at the back, ion-strengthened glass with improved polarizer, IPS liquid crystal display and a fingerprint-resistant coating. For the processor, whereas iPhone 5s used A7, the new models use a 64-bit A8, along with similar upgrade in the M7 motion coprocessor to M8. And of course, the list goes on. iPhone 6 Plus, which sets itself apart from iPhone 6 by its image stabilization in camera, landscape mode for content display and a longer battery life, has sold more than iPhone 6 so far. But the feature that really makes the iPhone 6 Plus more attractive must be the larger screen, allowing for easier typing and reading. It would seem that those previous iPhone users who upgraded their phone secretly wished that the touchscreen was larger.

Alongside the new larger iPhone, Apple has announced the first new product line since the death of Steve Jobs – the Apple Watch. The device is known to run apps that tracks health and fitness, includes a touch screen and Siri, and communicates with the iPhone. Apple Watch will be available next year and will cost around $350.

As of 2013, around 50~60% of American adults were smartphone owners. In the scope of the global phone market, market shares of smartphone and feature phone converged only around 2012. In other words, the smartphone market has been gradually increasing, and a successful product such as iPhone would fully benefit from a growing market in increasing their sales by each release. I agree with the 4-million people who have ordered already that the new iPhones have beautiful design. But Apple achieving a higher sale and breaking its previous record is not really new to us – especially when the smartphone market has been growing in global scale every year. The trend shows that the feature phone (or so-called 'dumbphones') will almost disappear or reach some saturated point in global phone market in the future. It would be much harder for any smartphone company to achieve improvement in sale because that would require someone to switch to a different smartphone – rather than buying the first smartphone. In that case, a larger portfolio of smartphone products will definitely be helpful to gain more market share for the company by attracting users with different tastes. The compatibility among the same manufacturer's products – such as iPhone and Apple Watch - could also act as a deciding factor to choose their product for convenience.

Currently, iPhone has over 40% of smartphone market share (with Samsung being the second over approximately 25%) in the US. We can say that since 50% of US population owns a smartphone, of which 40% is iPhone, at least 20% of US population will benefit from the compatibility that Apple Watch offers. This already puts Apple Watch at much better position in the smartwatch market. The health monitoring technology is a rising field in both research and industry. The future market of wearable devices is well defined today – similar to what that of smartphone was before – and smartwatches with health-related metrics already exist in the market.

Apple has a history of entering a sector relatively later than other consumer electronics companies, and the iPhone is a prime example. Today, however, iPhone dominates the smartphone market and keeps the attention of public focused on new releases every year. From Apple Watch's somewhat relatively high price – about half of that of iPhone – it could be as successful as iPhone becoming the flagship product line for the company and leading force to induce the market with its own innovations. In any case, it is sure that health smartwatches are going to be the next common device that we will see in everyday life.

Space Rocks Rock

Meteors Strike Nicarauga

CAMERON SOLTYS
2A MECHANICAL

A few weeks ago, in the late evening of Saturday September 6th , the residents of Managua—the capital city of Nicaragua—awoke to the sounds of an explosion. The next day, a 12 metre wide crater was discovered in a desolate and lightly-forested area of the city. Government scientists reported that the explosion and resulting crater were the result of a small meteorite impact. They cited seismic readings, the conical shape of the crater, and other on-site evidence as proof for their conclusions. Given the size of the crater, the impact would have been a one kiloton explosion, equal to the energy released by detonating one ton of TNT.

Many scientists and organizations were quick to criticize the meteorite theory. Among them is Bill Cooke, head of NASA's Meteoroid Environment Office, who says that "[he is] very sceptical" because there have been no reports of the large fireball which would have resulted from the impact, despite allegedly occurring near a metropolis of around 1.5 million people. Others have noted that there have also been no recovered meteorite fragments, nor reports of a bright streak through the sky—a brighter version of the streak which gives meteors the nickname "shooting stars" when they burn up in the upper atmosphere—before impact. Furthermore, an additional claim by the Nicaraguan scientist that the meteorite is related to the close passage of asteroid 2014 RC to Earth has been dismissed as ridiculous since the Nicaraguan event occurred 13 hours before 2014 RC made its closest pass.

It would seem that the Nicaraguan government's claim that the mysterious crater as the result of a meteorite impact is dubious, especially in light of the crater's close proximity to Managua's international airport. Meteors and other space debris, such as interplanetary dust, actually enters Earth's atmosphere on a surprisingly regular basis. For instance, it has been estimated that there are between five and ten meteorite strikes on Earth annually (that is, meteors which make it to the surface intact). In total, Earth vacuums up about 40 000 tonnes of space debris every year, even as it loses 96 000 tonnes of hydrogen, and 1600 tonnes of helium (which, being rare on Earth, is actually a somewhat pressing issue).

The most memorable meteorite strike of recent history is undoubtedly the Chelyabinsk meteorite, which entered the atmosphere and exploded over Russia in February 2013. This massive asteroid—20 metres in diameter—expended 1.8 petajoules of kinetic energy in our atmosphere (equivalent to 500 kilotons of TNT), much larger than many nuclear weapons in our arsenal including both the Hiroshima and Nagasaki bombs. The shock wave was strong enough to do significant damage on the ground 30 km below, primarily breaking windows. The explosion was also picked up by various infrasound stations of the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), which are intended to detect the shock waves from atmospheric atomic test bombs banned under the terms of the treaty. And while the Chelyabinsk meteorite may be a once-in-a-lifetime event at the very least, CTBTO reports that it recorded 26 major meteorite impacts between 2000 and 2013.

While a major impact, like the type which is hypothesized to have killed the dinosaurs, or even another Chelyabinsk-style event may be unlikely tomorrow, in the larger scheme of thousands or hundreds of thousands of years it is a scenario that humanity will eventually have to face. Already fascinating and significant research is being done on how we could identify and mitigate these threats. For instance, the Sentinel Space Telescope, currently being developed and built for the non-profit planetary defence B612 Foundation, could detect up to 90% of all near-Earth asteroids larger than 140 metres in diameter. And while the ESA's Rosetta comet-orbiting probe may not be specifically designed to study comet-rerouting strategies, the information it's sending back could undoubtedly be useful in that task.

So even if a meteorite didn't land in Nicaragua creating a massive crater without anyone seeing it hit, keep looking up at the sky. There's a lot of stuff to see, and some of it happens more often than you would think.

Welcome Class of 2019

The Past And Future Are Yours

CAMERON SOLTYS
2A MECHANICAL

Welcome everyone to the new school year! I am sure that it has been a busy few weeks for everyone, and I hope that everyone has been able to adjust back into the school-year mindset. I would like to extend a particularly warm welcome to all of the first years, who are working on their third week of university. I hope that you have all had a great experience so far, and that Orientation Week helped ease you into your awesome but somewhat frightening new home.

I was a Big this O-week, and it was probably one of the best experiences of my university career so far. Sure the weather was bad; we got rained out on both Tuesday and Thursday, meaning that the Hardhat Ceremony was done on a team-by-team basis and we missed the crowd-favourite EDCOM Smash. But thanks to the hard work of all the leaders, organizers, and frosh it was still an epic spirit-building week. A particular thanks must be given to the EngFOC who, after planning O-week all year, rolled right around every twist and turn. They rushed to make some very fun low-key events for Friday evening after the main attractions were cancelled, and even managed to rescue SCUNT in the form of a one-hour "miniSCUNT" on Saturday afternoon.

O-week is a special week that only happens once per year. Even the most menial of tasks become fun and entertaining. For instance, stuffing Orientation Bags. Get two lines of people, one holding holding bags and walking slowly, the other placing objects into the bags. It should be a dull, tiresome, and even excruciating activity. But if you add some music, then the magic of O-week turns bag-stuffing from a laborious task into some sort of weird and exciting extreme speed-dating. Meet someone for five seconds, and then continue the conversation four minutes later when they zip around again. Or if that is not your style, just start a competition with those around you to see who can do the most skillful bag-stuff slam-dunk.

Perhaps the thing I loved most about O-week was that, when I wore my leader shirt, everyone and anyone would come up to me for help. It was fulfilling to be able to help one, two, or even a half dozen people in a walk across campus. I didn't always have the answers, and more often than not I just directed them to the Turnkey Desk or another, more competent leader. But the questions I could answer made me feel great that I was having a positive effect on someone's life.

On the rest of this page you'll read some more awesome stories from O-week. In particular, we have some pieces from first years (Hooray! It's always exciting to get new writers.) on their experiences, who's opinions are probably more important and interesting than mine given the nature of the week. So step on in, and consider volunteering to help out next year. Take it from me, it will be well worth your time to do so.

2014 Orientation Week Media Team

The Saturday miniSCUNT, with events such as Melon Bowling, was a great success

Suncayr - Colour Changing Marker For Sun Safety

NACHIKET SHERLEKAR
3B NANOTECHNOLOGY
CO-FOUNDERS

Waterloo has been a centre for ideas and entrepreneurship for many decades. The presence of an open collaborative culture and the emphasis on ownership of intellectual property has helped the University of Waterloo gain huge success in the creation of start-up companies. In this column, I plan to interview founders of recent start-ups that have gained recognition for their novel products and ideas. In this issue I interviewed the members of Suncayr, a company comprising of fourth year Nanotechnology Engineering students.

Rachel Pautler is quite excited and animated as she talks about her start-up, Suncayr, and its novel product – a marker applied on the skin that changes colour when one's sunscreen wears off. As she begins to realize that she is dominating the discussion, she abashedly apologises to her team members, Hayden Soboleski, Andrew Martinko and Chad Sweeting, but they don't seem to mind. "She is the CEO after all", remarks Andrew.

The four of them, along with fellow Nano student Derek Jouppi, conceived Suncayr last fall as part of their Fourth Year Design Project. Roughly a year later, they have achieved what many engineering students only dream of when starting university: Suncayr was recently incorporated, and their product has been getting a lot of attention and awards. Only last week, the James Dyson Foundation selected them as a national level runner-up, and they will be proceeding to the International round along with four other Canadian start-ups. Publicity has also come to them in the form of an article in *Gizmodo* and on *1000startups.ca*, as well as an interview with 570News-Kitchener.

"We initially thought of using a patch that goes on the skin and changes colour, but then realized that direct application onto the skin would be more efficient", says Rachel. Unfortunately, they couldn't reveal the exact mechanism behind the working of their product. All I could glean from them is that the marker contains a molecule that changes from clear to blue on exposure to UV radiation. Are there any potential applications besides avoiding sunburns? Rachel states that it could also be used to give a visual signal to indicate the completion of UV polymerization, though this is a relatively niche research application. Their official website contains a questionnaire for their potential customers, and they hope to effectively target their product to a relevant demographic using this data.

I asked the team for their opinion of the start-up culture in Waterloo: "People have been really helpful. In fact, they might even be too helpful, though that's not really a complaint", says Andrew. The team originally approached Prof. Nasser Abukhdeir with their idea, who supported them from the start and encouraged them to form the company. Other professors have also been quite helpful to them, in addition to the people at the Velocity Garage and Communitech Hub, two big incubation centres in Kitchener-Waterloo. The team also spent their last co-op term doing an Enterprise Co-op, or E Co-op. During this time they received the Norman Esch Enterprise Co-op Award, as well as the Velocity Fund Finals $5K award.

Regarding their next steps, the team plans to get a patent for their product and receive funding for expansion; simultaneously carrying out product development and enhancement. Their ultimate goal is to become an established tech company specializing in materials. However, they stated that if an offer of acquisition came along from a bigger company, they might not be able to refuse. With an idea as simple and appealing as theirs, these dreams might not be too far from being realized.

Ian Holstead

The Suncayr Team. From L-R: Hayden, Derek, Rachel, Andrew and Chad

Detailing Adventures as a Co-Op Student in the Yukon

Kristina Lee

KRISTINA LEE
3N ENVIRONMENTAL

I had initially thought about writing about my trip to Tombstone Territorial Park in Yukon. I made the trip on Labour Day weekend to see the Tombstones, but mainly to see them in their fall colours - which are spectacular if you were wondering!

Now fall? It's hardly even the end of September. It didn't really cross my mind until a month before my flight what season it would be. I flew up mid-August hoping to get a little taste of the Yukon summer but didn't quite make the cut. The fall had started by the time I arrived and I was informed that it would end early-November, if I'm lucky.

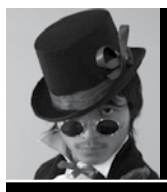
Lots is happening during this short season, the days are shortening and the colours are changing. I'm sure you all heard about the crazy aurora that was supposed to be seen across Canada and the States. Unfortunately I didn't get to see it. For one, I would have had to stay up until the wee yearly morning because the days are still long. There has also been a rather annoying amount of cloud coverage. It's best I leave my "late" nights until December when the days are only light while I'm at work and the clouds can't form because it's too cold out.

I have seen some cool stuff though! Being a city kid I've seen very little wild life. This past week I've been spoiled. I was hiking a summit trail and look to my right and there was Mr. Black Bear munching away on some berries. I also saw a fox, which was quite different than how I had imagined. The colour was a little rustier and it was quite thin - I'm just thankful the dog I was walking didn't see it.

There's a lot of talk of moose hunting right now, tis' the season after all. My co-workers are planning trips and I saw about 10 hunters in Keno City out and about looking for a bull to shoot. I was away for four days at site and when I came back I was welcomes by the smells and sight of a moose carcass hanging in the garage. I've seen moose out east before but I had forgotten how big they grow. This guy must have been huge because the hind quarters are almost as tall as me. The antlers are sitting out on the front porch and aren't like bird's bones - they carry some weight. I wouldn't be able to carry that on my head, I would probably end up sleeping all day or swaying my head around because my neck would be jelly.

We'll see what else this co-op term has in store for me. For now, I'm just going to pick some berries and explore!

Aviators — Fun in the Sun Since 1936



VINCENT MAGAS
2A MANAGEMENT

HIT REPLAY

The sun is shining brightly, the sky is clear, and The Rolling Stones is blasting on the radio, and to top it all off you have your trusty green-tinted, metal-rimmed, Ray-Ban Aviators. Whether you're driving down the highway to Woodstock to see Hendrix, flying your Boeing B-29 Superfortress, or simply enjoying iced tea outside POETs, aviators are perfect for any sunny occasion! There's nothing more stylish, more retro-cool, than a pair of sunglasses that have been a staple since the 1930s. These iconic sunglasses have made a resurgence in popular culture and they're back!

So what are these classic & rockin' sunglasses? Aviator sunglasses, also known as Pilot's Glasses (à la U.S. Air Force fighter pilots) have been around since the 1930s. Although, they have evolved into many different styles the classic aviator is usually known for its Teardrop-shaped lenses that provide maximum sunlight protection. Usually made with a metal frame that sports either a brass, silver or gold finish. They come in a variety of lens colours the usual being brown, green or dark grey.

In the late 1930s, Bausch & Lomb's Ray Ban sunglasses developed sunglasses with glare protection intended for fishermen and golfers. Although these were not yet known as aviators, they were in essence the same shape and style of the aviators. It was in 1936 when the US Army Air Corps asked them to design sunglasses for pilots for protection against sun glare, known to cause headaches and altitude sickness at the time. Not long after, Ray Ban created what then became standard issue for fighter pilots. So began an era of aviator sunglasses!

They were soon made available to the public in 1937 by Ray Ban. Aviators were seen all over front page news in 1942 when an aviator-wearing General Douglas MacArthur landed on a beach in the Philippines during the war. However, it was not until the 1960s that aviators became widely popular in the public. During the height of The Beatles' popularity, Paul McCartney and Ringo Starr were photographed wearing aviators, causing a surge in the aviator's popularity.

Throughout the years, aviators were worn by many pop icons and it's rugged, high octane design became an iconic look. Popularity increased further in 1985 when the great Freddie Mercury of Queen wore them on the album cover for Mr. Bad Guy, and in 1986 when Top Gun stars Tom Cruise, Val Kilmer and Anthony Edwards sported the frames playing the roles of Air Force Pilots. Not to mention, UW Engineering's own EDCOM.

In the late 1980s - early 1990s aviators waned in popularity, making way for a variety of other sunglasses to dominate the market. It wasn't until the 2000s that the frames re-appeared in pop-culture through acts such as Johnny Knoxville who wore them on Jackass.

Nowadays, aviators come in all sorts of styles and makes! Copies of the original Ray Ban design have been followed and altered by many other eye wear companies and continue to be available to everyone around the world. Aviators are now available in an assortment of frames deviating from the original metal to plastic for a sportier look and even mixed frames for the best of both worlds! So why don't you get a pair of aviators, and rock an iconic look that's been 70 years

Fall for Biopics: a TIFF Report

ANJIDA SRIPONGWORAKUL
3B MANAGEMENT

Fall is here. A crisp, chilly beginning to the school year and the 2014-2015 awards season, which recently kicked off North American leg with TIFF, the annual Toronto International Film Festival. As the festival drew to a close on Sunday September 14, let's take a look at its highlights.

The award contenders are a mix of biopics and lead-character-driven dramas this year. *The Imitation Game*, directed by Morten Tyldum, took home TIFF's Grolsh People's Choice Award as the most popular film of the festival. BBC *Sherlock's* Benedict Cumberbatch stars as the mathematics and computer genius Alan Turing, whose computerized cryptoanalysis played a major role in helping the Allies win World War II by cracking intercepted German messages encrypted by the Axis encryption machine known as "Enigma." In addition to Cumberbatch, the moving biopic boasts Keira Knightley (*Begin Again*) in the role of Joan Clarke, Turing's platonic foil, and an ensemble cast of talented British actors: Mark Strong (*Sherlock Holmes*), Matthew Goode (*A Single Man*), Charles Dance (*Game of Thrones*), Allen Leech (*Downton Abbey*), and Rory Kinnear (*Penny Dreadful*).

Competing alongside *The Imitation Game* in the awards race is the biopic of another genius, the physicist Stephen Hawking, portrayed by Eddie Redmayne (*Les Miserables*), in *The Theory of Everything*, directed by James Marsh. The film introduces us to Hawking as a student at Cambridge University, and revolves around his relationship with Jane Wilde (*Felicity Jones, Like Crazy*), fellow Cambridge student, who later became his wife and stays by his side as his illness takes hold. It is, according to reviews, not a "love conquers all" portrayal, but more of a proof that, should love survive the battles and casualties it has to conquer, then it is more than enough.

Wild, a drama directed by Oscar-winning film *Dallas Buyers' Club's* Jean Marc Vallee, is based on the memoir of author Cheryl Strayed, who made the choice to go on a thousand-mile hike along the Pacific Crest, after the deaths of her mother and of her marriage. Reese Witherspoon (*Walk the Line*) stars as Cheryl, a woman whose confession, "I'm lonelier in my life than when I'm out here," sets her on journey alone in the wild to battle her own demons and come to terms with herself. Critics have praised Witherspoon for her performance, and she is definitely on track to become a nominee in the awards race this season.

A film receiving no less buzz and rave reviews is director Dan Gilroy's debut, *Nightcrawler*, a twisted dark comedy about the world of freelance journalism. Jake Gyllenhaal (*Prisoners*) takes the lead as the crime-scene paparazzo, who spews out replies to his assistant's anxious "You've got to call the cops," with "I know, but at the right time." Hidden secrets, withdrawn information, and deception reign in *Nightcrawler's* world, one entangled web of explosive car-chasing rides you would not want to miss this fall.

Last but not least is Bennett Miller's, the director of *Moneyball and Capote's*, *Foxcatcher*, a brooding, intense film about two brothers Mark and Dave Schultz (Channing Tatum, *21 Jump Street* and Mark Ruffalo, *The Avengers*), former Olympic wrestling champions, and their involvement with a neurotic millionaire, John du Pont (Steve Carell). Watch *Foxcatcher*, and you'll discover how dark comedians like Carell, who was not Miller's initial choice for the role until after a sit-down meeting with the director himself, could be.

Now we head back from Hollywood to local features by Canadian filmmakers, celebrated at the festival. This year's Canadian Goose Award for Best Canadian Feature Film went to *Felix et Meira*, helmed by Montreal-born director Maxime Giroux. The film tells a story about Meira (Hadas Yaron), a married woman seeking freedom from her Montreal Orthodox Jewish community's strictures and finding it in a young man, Felix (Martin Dubreuil), mourning his estranged father's death. Meira's story comes to a halt when she has to decide whether to leave her community for Felix or to stay.

Another Montreal born director, Jeffrey St. Jules, won the City of Toronto Award for Best Canadian Feature Film, for his film, *Bang Bang Baby*, a darkly comic and colorful parody of 50s sci-fi films and musicals in the themes of small-town dreams, burden of family responsibilities, and chemical mutations. The film stars Jane Levy (*Evil Dead*) as the prim and sweet high-schooler Stephy, who dreams about becoming a singer, in the small fictional Canadian town Lonely Arms. When her alcoholic father (Peter Stormae, *Fargo*) refuses to allow her to attend the American Ingenue Singing Competition in Manhattan, Stephy's dreams are crushed. At the same time, the local creep, Fabian (David Reale) tells her there is something toxic leaking from the town's plant, and the singer of her dreams, Bobby Shore (Justin Chatwin, *Shameless*) arrives into Lonely Arms with a car in need of repair.

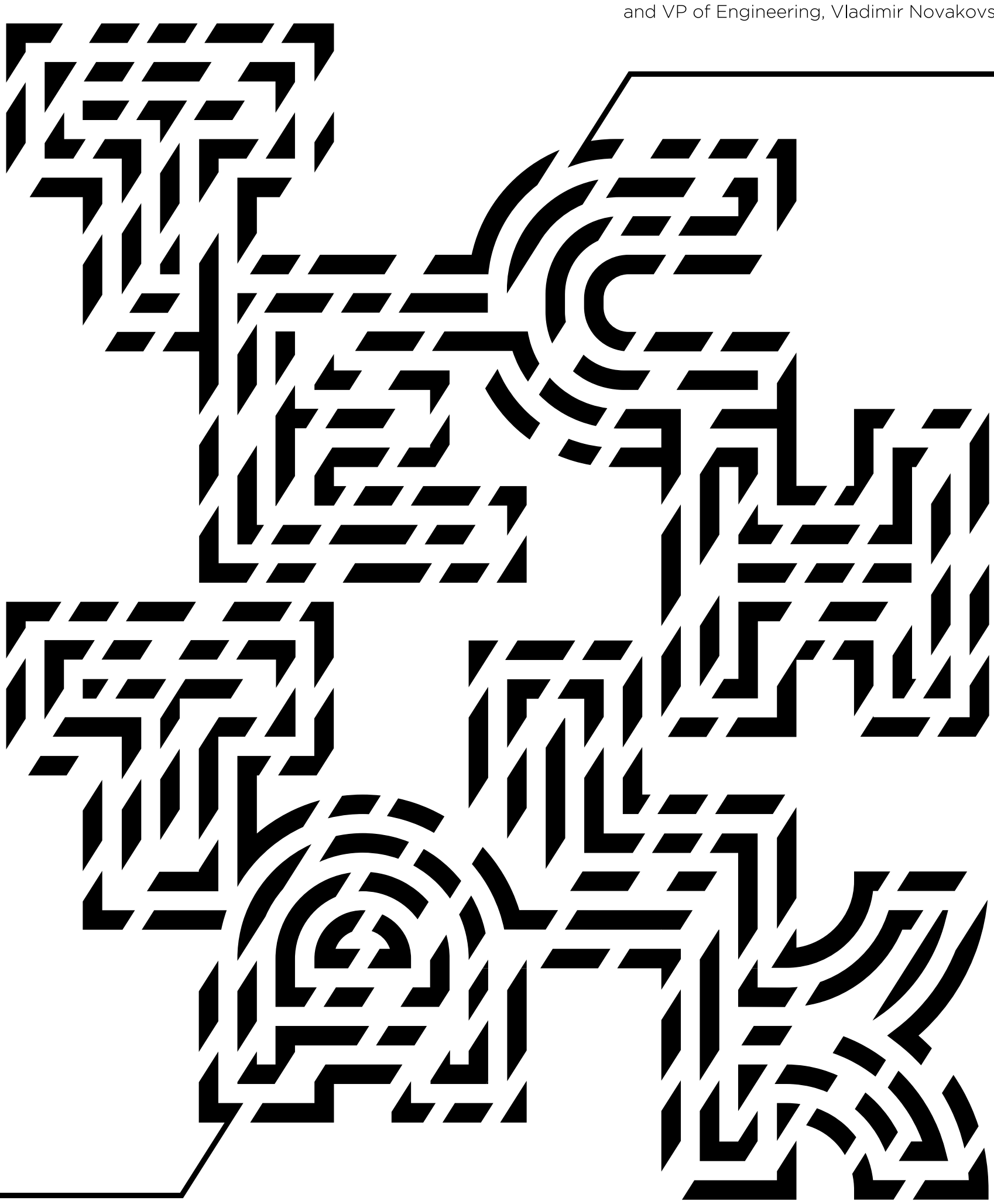
Several notable films in the awards race are mysteriously absent from the festival, having had their premieres somewhere else instead: from David Fincher's *Gone Girl* (a drama about a crumbling marriage, which premiered at the New York Film Festival), Alejandro Inarritu's *Birdman* (a drama about a fading actor who once played an iconic superhero and needs to patch up his life, which premiered at the Cannes Film Festival), to Paul Thomas Anderson's *Inherent Vice* (the highly anticipated film from the arthouse director dealing with the story of a detective investing the disappearance of a former girlfriend, which also premiered at Cannes).

Other films screened at the festival to look out for in the future include: *Pride*, a film about 1984 British gay activists who assist miners during the National Union Mineworkers strike, led by Bill Nighy (*About Time*), Andrew Scott (*BBC Sherlock*), and Dominic West (*BBC The Hour*); and The Riot Club, starring an ensemble cast of the next generation British actors (Sam Clafin, *Hunger Games*), Douglas Booth (*Noah*), Max Irons (*The Host*), and Olly Alexander (*God Help the Girl*), to name a few, and joined by Natalie Dormer (*Game of Thrones*) and Holliday Grainger (*The Borgias*)) as Oxford students causing trouble in the university's infamous Riot Club.

That's it for the 2014 TIFF report. Judging from the festival lineup, this fall and the upcoming winter definitely has some exciting, unmissable films in store.

ADDEPAR at **WATERLOO**

Addepar tech talk with Waterloo alumnus
and Engineering Lead, Evan Goldenberg,
and VP of Engineering, Vladimir Novakovski



FRIDAY
SEP. 26TH
2:00PM

Fishbowl DC 1301
Food Provided

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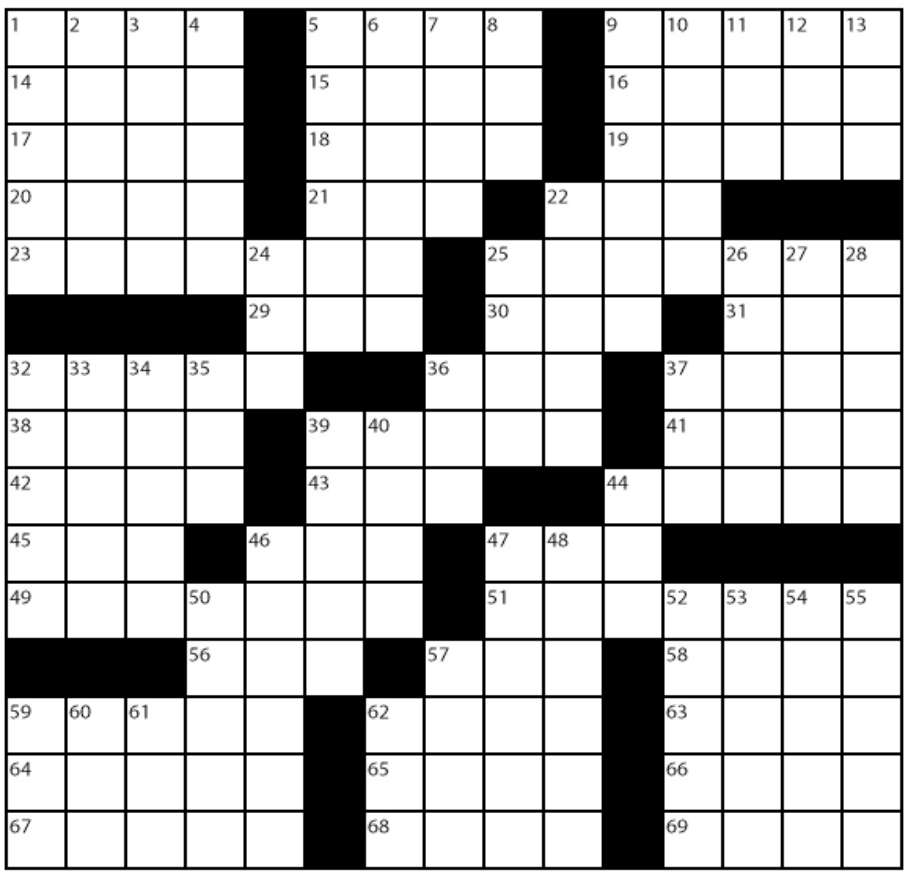
ADDEPAR

The Iron Crossword

Pennames and Pseudonyms

NANCY HUI
4N CIVIL



ACROSS
1 Loathe
5 Vegetable known as ladies' fingers, bhindi, bamia, or gumbo
9 A measure of gem size
14 Christian prayer end
15 Back
16 Seamaster maker
17 Express suppressed emotions
18 Came and ____
19 Titled
20 Double-reeded noisemaker
21 Finish
22 ____ Lanka
23 a.k.a Charles Lutwidge Dodgson, mathmetician and master of literary nonsense
25 a.k.a. Stanley Martin Lieber, comic creator(2 words)
29 You'd hope your TP has two or three
30 Gesture of affirmation
31 Airport estimate (abbv.)
32 The colour of aged photographs
36 "Some Nights" band
37 Dromaius novaehollandiae, of Australia
38 Ornamental keratin structure
39 a.k.a. Georges Prosper Remi , Tintin cartoonist
41 An insufferable song by an insufferable band who obviously misinterpreted the title of the song.
42 Eyeball
43 Japanese sash
44 Spanish city from which sherry originated
45 Anguilliform fish
46 Massage motion
47 XXX/X
49 a.k.a. Theodor Geisel, cartoonist and children's author
51 a.k.a. Daniel Handler, author of some very unfortunate children's books
56 Untruth
57 Encyclopedia identifier (abbv.)
58 Perambulate
59 a.k.a. Samuel Clemens, American author
62 Mock
63 Kimberlite (diamonds) and bauxtite (aluminium)
64 Fritter away
65 Gordian or square
66 An email folder
67 Yellowish brown
68 Ruby and carmine
69 Give lip

DOWN
1 2005 film starring Anne Hathaway's chest
2 Protozoan
3 A male voice
4 Second-biggest key on a keyboard
5 a.k.a. Eric Arthur Blair, writer of dystopian novels
6 Act like a straight-A student
7 a.k.a. Alisa Zinov'yevna Rosenbaum, Objectivist writer
8 Gallery filler
9 a.k.a. Józef Teodor Konrad Korzeniowski, "Heart of Darkness" writer
10 At full speed
11 The most exciting stage of sleep (abbv.) or a fuzzy but critically acclaimed band
12 Era
13 A bit
22 Granite or slate
24 A Greek exclamation
25 Like a bug in a rug
26 Zoboomafoo species
27 A study in French
28 Relaxes
32 Performed a farrier's work
33 Like a frosh or a co-op student on their first day
34 Clumps on a fabric
35 Anger
36 Sat follows
37 Before
39 Abode
40 Recedes
44 Marking on top of a watch
46 Viking vandal?
47 14-legged crustacean
48 Fjords
50 The best of the best of the best
52 King's ___ Station
53 SNSD country
54 Smooths out
55 Diagnostics
57 Barn ornament
59 The time at which this crossword was finished
60 A GI Jane in WWII
61 Trainer Ketchum
62 a.k.a. Robert Galbraith, children's author turned mystery wrister (abbv.)

Sudoku

#2014-11

SPENSER GOOD
4A MECHANICAL

Easy

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

Medium

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

Hard

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

Issue 2 Deadline:
Friday, October 3 at 6:00 p.m.
Send your submissions to:
iwarrior@uwaterloo.ca

THE IRON INQUISITION
Jessica Keung, 2A Civil & Vince Magas, 2A Management

"What do you do in your free time?"

"What's spare time...Sleep"
Gabrielle Kim, 1A Mechatronics

"Chillax"
Michal Kononenko, 2A Nanotechnology

"I play with concrete"
Ola Suchon, 2A Civil

"Mark Resumes"
Srikajan Santhirakamaran, 4A Mechanical

"Wine and cheese tasting"
Kevin Nause and Anthony Clark,
3B Computer

"Dance...Ballroom dance"
May Beauregard, 2B Mechatronics

Dwarven Science

My Kingdom for the price of Carrots

Kyle Pohl, CoolEng '14

Prof Quote

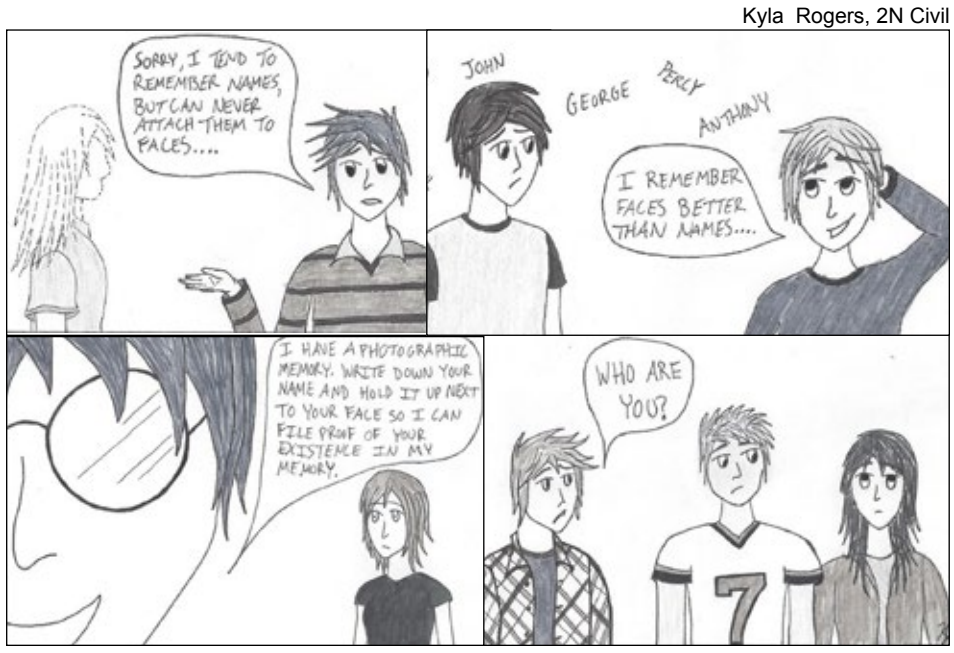
So we'll be absorbing infinite power in this circuit, which if you're a politician, [it] is probably a good thing, but if you're a real circuit, it'll probably blow up.

Prof. Narin - ECE 140

Too Geeky For Humour

Possible Ways to Remember Peoples Names

Kyla Rogers, 2N Civil



LOOKING FOR THE CROSSWORD? DON'T PANIC! FLIP THE PAGE
If you would like to become the next crossword guru our cross-word creator is looking to retire. Submissions are always welcome!