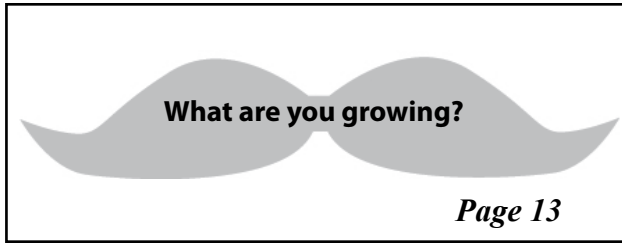


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Computer Lab Review

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What are you growing?

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The Brew Man Group  
HighBaller Pumpkin Ale

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## The Grand Opening of Engineering 5

**MADELAINE LIDDY**  
2A NANOTECHNOLOGY

Tuesday, October 19<sup>th</sup> marked the grand opening of the new engineering building, Engineering 5. The day featured speeches by our Dean of Engineering, Dr. Adel Sedra; the newly elected president of the university, Feridun Hamdullaphur; a member of the Dean's advisory council, Savvas Chamberlain; and representation by the student body through the director of WEEF, Praveen Arichandran.

Students, alumni, faculty and staff were all welcomed with food and refreshments as Engineering 5 was explained from the vision to the final product. Engineering 5 was one of the key focuses of the Faculty's Vision 2010 project. Once the speeches were completed, the visitors were welcomed to tour the facility, guided by student and faculty volunteers, or wander as they wished through the six floors. There were members of each of the faculties and student teams present in their respective areas ready to answer questions that the visitors may have had about the building or particular student teams. It was an enjoyable day with many visitors, enthusiastic speeches and close to 700 cupcakes that conveniently spelled E5.

The 176 000 sq.ft building was designed by Andrew Fontini, an architecture alum-



Cutting of the ribbon at the E5 Grand Opening Angelo Alaimo

nus from Waterloo. However, the design of Engineering 5 was far from the first step; the vision for Engineering 5 began long before that. This project began in 2006, when David Johnston and Adel Sedra agreed upon a \$120 million dollar fund raising plan that would not only benefit undergraduate students, but faculty, staff, graduate students and members of the community. The purpose of Vision 2010 was to further identify

Waterloo as an internationally recognized university and the best school for undergraduate engineering studies in Canada.

### Vision 2010:

Vision 2010 featured a large sum of donation money that would go towards all members of the University of Waterloo community. These included donations towards the graduate programs, expanding the research programs, enriching the stu-

dent experience and the building of three new engineering facilities.

The graduate programs would see a 29 million dollar donation towards their scholarship program. This would be enough to create 209 new graduate scholarships in order to attract more graduate students to Waterloo. This would be matched by the University, effectively doubling the donation.

Through the Vision 2010 campaign, the research program would double their funding. This 30 million dollar donation would go towards 20 endowed chairs for each faculty. This fund would also be matched by the university, raising the donation to 60 million dollars.

Undergraduate students benefit from the Vision 2010 project in multiple ways, the first being the enrichment of the programs through the Rome program endowment and the Centre for Business, Entrepreneurship and Technology (CBET) challenge. The Rome program endowment goes towards Waterloo's architecture students, where the students travel to Rome in third year for a semester to study at Waterloo's studio. Through Vision 2010, the Rome program would see a \$5 million donation. The CBET challenge would receive a \$500 000 donation, which would go towards Waterloo's CBET.

See Engineering 5 on Page 3

## POETS, CnD Closing for Asbestos Removal

**LYDIA TERISNO**  
1A CHEMICAL

Did nuthin', saw nuthin', heard nuthin'. Does that phrase sound familiar to you? You might see it once or twice on the way to class, or maybe you see it all the time because you are always in POETS. There is a bad news for POETS lovers: it will be closed starting on November 15, 2010 together with CnD and Novelties. The last day of operation is Friday, November 12<sup>th</sup>. The engineering home base will be closed for foyer renovation and asbestos removal. It turns out that there is asbestos

accumulation in the ceiling on the second floor of POETS and probably in CnD and Novelties as well, since they are so close together.

The good news is that you will have a better engineering lounge when it is reopened in January 2011. There will be new furniture in the foyer (thumbs up!) and a new sink in POETS, a plus for anyone who enjoys mixed drinks since bar services can then sell hard liquor. For those that are racing to Novelties right now to get some Christmas gifts, sit back and calm down. Novelties will not be closed completely; instead, it will be moved to the

back room of Engineering Society Office in CPH 1327. You will still have time to get an engineering-crested mug for your folks back home.

On Friday, November 12<sup>th</sup> the POETS Managers are hosting a POETS Going Away Party during serving hours! Drop by for one last look at POETS and relax in your student space before it closes! Other engineering events that used to be held in POETS will take place in other venues until POETS is reopened. The lounge might not be there, but the Engineering Society still rocks and they will keep you busy at the end of term with interesting events. In

January 2011, the CnD will be back on business first and then POETS will follow afterwards.

Plummers, make sure you schedule your class party in POETS before the second week of November or you will not have the chance until next spring (considering that you will be off for work term in Winter 2011). For one and a half months, we will do nothing, see nothing, hear nothing in POETS besides some drilling and construction sounds. No more GLEE nights, but as always: SAFETY FIRST! Asbestos is a health hazard after all. Let's just hope that the construction will finish on time.

## Waterloo Municipal Election Results

**SPENSER GOOD**  
1A MECHANICAL

With the end of Hell Week and the start of classes again, all is back to normal for us engineers at UW. Much the same can be said for Waterloo City Hall. The election on October 25<sup>th</sup> came and went in the city without much dramatic change, as Mayor Brenda Halloran regained her position with a comfortable victory. Her competition was strong, but fortunately for the returning mayor votes seemed to split pretty evenly between the three other main candidates; those being two-term councillor Jan d'Ailly, retired business executive Dale Ross and former business

professor Franklin Ramsomair. Halloran becomes the first mayor of Waterloo to be re-elected since Brian Turnbull, who ended his second term in 1997. Halloran's popularity is largely credited to her success in controlling and improving the finances of the city, which have been embroiled in debt and the disastrous RIM Park scandal. She has also promised an extensive review of the city's transit operations, namely the prospect of an \$800 million light rail transit system, and has committed to extensive environmental upgrades.

Although Waterloo will continue to be guided by Brenda Halloran, there have been a few changes in City Hall that are

worth mentioning. The most prominent change is the arrival of 30-year-old Jeff Henry, a former academic counsellor at UW, as Ward 6 Councillor. Henry will not only be the youngest councillor for the City of Waterloo, but he also won against 79-year-old veteran politician Mike Connely. His platform included addressing poverty, taxes and the student housing crises.

Melissa Durrell, daughter of former Ottawa mayor Jim Durrell, has won the seat vacated by the incumbent Ian McLean in Ward 7. She beat competitor Peter Woosencroft by more than 600 votes. She credits her success by running a campaign that she describes 'as a mix of old

and new school', relying on both door to door canvassing and extensive participation on online media such as Facebook and Twitter.

Other than Durrell and Connely there will be no changes to City Council. Scott Witmer, 35, defeated opponent Henrik Noesgaard, 63, to keep his seat. Angela Vieth, Diane Freeman and Mark Whaley regained their spots on City Council, with only Mark Whaley experiencing a close race against strong challenger and former councillor Gary Kieswetter.

If you're eager to see the official voting results, they can be found at <http://www.city.waterloo.on.ca/DesktopDefault.aspx?tabid=2696>.

# Letter from the Editor

## Ice Cream, Food Engineering and Ambiance



**YIK TUNG  
ROY LEE**  
EDITOR-IN-CHIEF

Greetings from the office of The Iron Warrior! It was a quite a crazy weekend with a few bumps along the way. Turns out trying to put together a newspaper after hell week is not a good way to take it easy and recover from the lack of sleep, caffeine withdrawal and whatever other things plague us after hell week. I must say that the fact that production weekend falls right after midterms and on Hallowe'en weekend definitely puts a damper on my weekend, but it is all good. I will live.

I am not sure about everyone else but midterms weren't actually that bad for me. The worst part was that last Electromagnetism midterm and the fact that I ran out of food at home about half way through the week. I probably spent an extra 20 or 30 dollars just because I went and ate out as opposed to eating at home. Even now, I still don't really have groceries so I'm still munching on random food from the plaza. Now, some of the food in the plaza is decent

and some of it just really sucks. However, a home-cooked meal will trump that anytime. Especially when you order a wrap that doesn't explicitly say that it has cheese and then they put cheese in it. This really sucks when you have recently discovered that you are lactose intolerant. Late onset adult lactose intolerance sucks! I would know. Imagine, one day, you are happily eating ice cream, some nachos or something that contains lactose that you find delicious. After a couple hours your stomach hurts and you have no idea why. Now this persists for a few weeks and you don't know why your stomach constantly hurts. It is a really crappy feeling. The worst part is when you forget you are lactose intolerant and you have that giant piece of ice cream cake or something and then the pain returns. You learn your lesson quite quickly, but then your friends torture you regularly because they forget you are lactose intolerant and say things like "Let's go get ice cream," or your roommate is sadistic and will threaten

to lace your food with "copious amounts of milk". Then you cry a little inside.

I enjoy cooking. It's a nice way to get away from your homework and make something delicious to eat. It really is a life skill. The thing that always gets me is that I seem to be incapable of making just enough food for myself. If you ask my roommates, they will tell you that last week I made about five litres of chicken stock one time, which is still sitting in our freezer waiting to be used. Another thing I made too much of is congee. I made about eight litres of that. However, I live with three other guys so leftovers are never a big problem. By the way, congee is like Chinese oatmeal. It's made of rice and lots of water, and then you add meat, mushrooms and other delicious things to it.



**Yummy... Ice Cream...**

ecoki.com

Now this is incredibly filling, but you'll be hungry within an hour.

My favourite thing to make is probably anything you can throw into a slow cooker, mainly because it will take you a few minutes to cut everything up and throw it into the pot. You can then come back in a few hours and everything is good to go and ready to eat. Just don't forget to make rice. I've made coconut curry, congee and beef casserole all successfully. However, I will admit that slow cookers are often terribly hard to wash and controlling the amount you make is impossibly hard. It's food though, so the more the merrier.

It is also quite impressive how long one can spend preparing a meal and how important plating and aesthetics is to cooking. People often compare cooking to an art or a science. You could also think of cooking as a combination of not only engineering, but art and science as well. You have to pick the right raw materials to make something delicious. You then have to control the amount

of heat that you add to ensure the perfect amount of protein denaturation (that was probably the nerdiest thing I've ever said about cooking). I've never actually considered cooking that way. To be honest, I usually just put stuff together in a pan or a wok and hope for the best. However, I do actually consider the process and what to put in my dish when I'm trying to make something specific.

Now, it has recently been brought to my attention that the field of food engineering actually exists. It covers a surprisingly wide range of engineering disciplines and can be closely related to agricultural and chemical engineering. Food engineering addressing things like shelf life, packaging processes, food safety, mass transfer of foods, food storage and many other neat things. Now this isn't what I was getting at when I first mentioned food and engineering, but it proves the point that engineering rules the world and that it can be applied to many different things.

As much as engineering is important, aesthetics and art play a huge role as well. I once watched a special on the Food Network about restaurants and the importance of lighting and ambiance.

It was very interesting and they made the same meal for two different dinner sittings and they got completely different results. The first sitting had bad lighting, minimal decorations, poorly plated out food and a non-descriptive menu. The food got an average rating of about three or four. The second sitting featured ideally dimmed lighting, nice decor, well plated food and very detailed and descriptive menu. The food was cooked using the exact same method and nothing was different. This set of identical dishes got a rating of eight to nine. When asked in a survey, patrons also said that they would pay a significantly more for the second sitting. Isn't it strange how the environment and what we perceive can play tricks on our brains? This is turn has an effect on our wallets.

So next time you go out to eat in a fancy restaurant, think about what you are paying for. Are you paying for the atmosphere or are you paying for the food and is it really worth those extra dollars?

THE IRON WARRIOR

The Newspaper of the University of Waterloo Engineering Society

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**Issue #4 Deadline: Friday, November 12th at 6:00pm for publication on Wednesday, November 17, 2010**

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**Fall 2010 Publication Schedule:** November 17 and December 1

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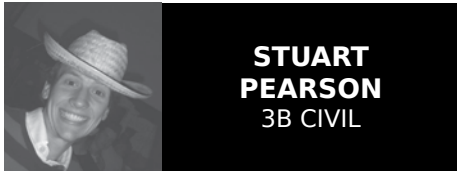
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# Poppies for Remembrance Day: Lest We Forget



**STUART PEARSON**  
3B CIVIL

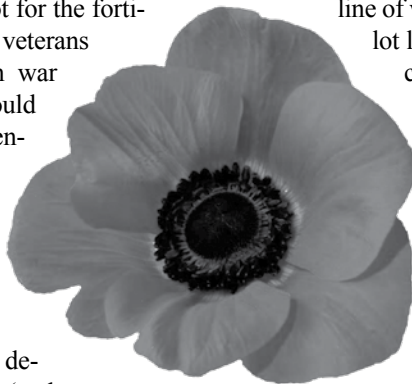
*In Flanders fields the poppies blow  
Between the crosses, row on row,  
That mark our place; and in the sky  
The larks, still bravely singing, fly  
Scarce heard amid the guns below.*

*We are the dead. Short days ago  
We lived, felt dawn, saw sunset glow,  
Loved, and were loved, and now we lie  
In Flanders fields.*

*Take up our quarrel with the foe:  
To you from failing hands we throw  
The torch; be yours to hold it high.  
If ye break faith with us who die  
We shall not sleep, though poppies grow  
In Flanders fields.*  
— Lt.-Col. John McCrae

For two weeks every year, Canadians purchase little plastic poppies to commemorate those who fought for us. They cling to our jackets but often fade quickly into the background, their meaning becoming lost in the hustle and bustle of our busy 21<sup>st</sup> century lives. It becomes all too easy to let the traditions turn into clichés and blur together; a recitation of In Flanders Fields, bugling of Last Post, and then a moment of silence. I urge you not to just go through the motions—take the time to reflect on the blessings in your life, and on the brave men and women who went through hell so that we don't have to. All too often, we take for

granted the relative security of our daily lives; I wake up every morning, hop on my bike, go to school, and return home more or less in one piece. We sleep soundly at night knowing that our families are safe, that we can enjoy the right to free speech, and that we will wake up with the same freedoms as our neighbour, regardless of our differences. Life inside that cozy bubble of good fortune tends to distract us from the fact that many people around the world do not enjoy the same rights and privileges. What's more, were it not for the fortitude and selflessness of veterans and those who died in war for Canada, neither would we. War is incomprehensible to anyone who has not experienced it first-hand. In my cushy suburban upbringing, I have never witnessed anything that remotely resembled it, despite Hollywood's best (and at times misguided) efforts. It is beyond my comprehension and I hope that I never have to find out what it is really like. With more and more veterans of the Second World War disappearing, there is a growing disjoint between the current generation and the sacrifices made over sixty years ago. For instance, I personally feel little connection to the War of 1812. Nearly 200 years later, its impact is still very important: if the then still-British Canadians hadn't defeated the Americans, our country would probably look very different today and most of us would not be here. However, it is difficult to connect to it and perceive it as a real experience when it



absolutedeen.com

happened so long ago. Let us hope that by being proactive and keeping history alive, students 140 years from now have a greater appreciation for what happened during the First and Second World Wars, and the many other conflicts in which Canadians have served. My dad's father was Canadian but fought in the Second World War with the British Royal Air Force (RAF). He was the pilot of a Lancaster bomber and defied the odds, surviving 21 missions over Europe during the final years of the war. In a line of work where the average pilot lasted only five missions, it certainly puts our own lives into perspective. When was the last time you did something with a mortality rate like that? Many students have similar stories about their grandparents or other family members who fought in the war; it was an event that to this day profoundly affects everyone, directly or indirectly. Most of the young men who went off to fight were no older than most undergraduate students here at Waterloo. Imagine if tomorrow you were plucked from your studies and sent across an ocean to fight for your country. Understandably, the soldiers would have been scared of what lay ahead, and afraid of losing what they had left behind; nevertheless, they heeded their country's call and bravely rose to the challenge. Such selflessness and courage sometimes seems to be in short supply these days. In the increasingly crowded and shrinking little global village of ours, it is more impor-

tant than ever to keep the peace and honour those who do all the hard work. The men and women currently fighting overseas in Afghanistan and Canadian peacekeepers around the world continue to uphold their country's mission to make the world a better place. Life is fleeting; you need to make the most of every minute of it because you never know when your time will be up. Life is ultimately what you choose to do with it. The truly incredible thing is that the brave men and women who fought in the wars chose to use their precious gift of life not for themselves, but to help us. That sacrifice is priceless and we are forever indebted to them. Those who died fighting paid the ultimate price, but even the ones who returned home were changed irrevocably, having sacrificed their youth and experienced horrors that no one should ever have to face. Life is awash with difficulties and hardship, and it is impossible to face it alone; we get by with the help of those who came before us. Take a moment and pause to think about those who blazed the trail for you. Your parents, family, and friends enable you to make it through life's struggles, which can be challenging enough without having to worry about your own safety and freedom. Above all, remember those who fought so that we could enjoy simple rights and peace. Be thankful for those with the courage and the passion to fight for what their country believes in. Canadian soldiers from World War I to Afghanistan have put their nation's well-being and ideals ahead of their own, and for that we must be forever grateful. Remembrance Day should not come just once a year; we must hold the torch high, and always remember.

## The Grand Opening of Engineering 5

From Engineering 5 on Page 1

The main donations from Vision 2010 would go towards three new buildings dedicated to engineering: Engineering 5, Engineering 6 and Engineering 7. This would be the largest physical expansion in Waterloo Engineering's history.

### Engineering 5 Construction:

The construction of Engineering 5 began two years ago, when David Johnston, former president of the university, and Dean Adel Sedra dug their shovels into the parking lot that is now Engineering 5. In total, this building's construction value would reach close to a quarter of a billion dollars.

Engineering 5 is now complete and students have already started to take advantage of its many new facilities and services. Engineering 5 is dedicated to three of Waterloo's engineering departments. Mechanical and Mechatronics Engineering are located on the 3<sup>rd</sup> floor, the Electric and Computer Engineering Department on the 4<sup>th</sup> and 5<sup>th</sup> floor, and Systems Design Engineering on the 6<sup>th</sup> floor. Each of the floors are joined by a very large black and white staircase that runs up from the 2<sup>nd</sup> to the 6<sup>th</sup> floor. The building also features some interestingly coloured new washrooms, for both genders, on each floor. However, the focus of this building is the 20 000 sq.ft Student Design Centre featured on the first floor.

### The Student Design Centre:

The Student Design Centre, or SDC, is dedicated to the undergraduate students of Waterloo Engineering. The purpose of the SDC is to allow the teams to work in an environment that allows them to collaborate ideas and resources. This kind of interaction has never been possible before at the university. Teams can now work in an open environment, instead of the seemingly random places that they

were located before, spread amongst the other engineering buildings around Waterloo. With the addition of the SDC, came a new director position, which was

given to Dr. Peter Teertstra, a professor of the mechanical engineering department. The main area of the Centre features individual bays for many of the En-

gineering Student Teams. Some of these teams include; the Midnight Sun Solar Car Team, the Waterloo Clean Snowmobile Team, Formula SAE, U.W.A.F.T, the Mini Baja team, Waterloo Aerial Robotics and various other teams. Other teams like the Waterloo Robotics team and the UW Nano Robotics Team have been given space in other areas of the building, allowing them to still benefit from this new facility.

The SDC also features a number of different services that can be used by the undergraduate students at Waterloo. These include two new dynamometer lab rooms, several engine building rooms, a sanding room, a painting room, and the new student machine shop donated by Waterloo Engineering Endowment Fund, WEEF.

Throughout the Vision 2010 plan, WEEF donated a total of 1 million dollars towards Engineering 5, which was matched by the Dean and again by the University of Waterloo for a total of 4 million dollars.

The second floor of Engineering 5 holds the donor wall, which features any alumni that have donated over \$1000 to the University and any other large private donations made towards Vision 2010. The second floor also features the Aeon Atrium, the Waterloo Robotics team, a shared office space available to the student teams, a new CAD studio, an electronics assembly and test lab with a brand new array of oscilloscopes and other testing equipment and a large computer lab located just inside the main entrance.

Vision 2010 is not yet complete, but new features of the 120 million dollar project are seen each day. One such addition is with the second of the three buildings, Engineering 6, scheduled to open in fall of 2011.



Angelo Alaimo

**Top: Cupcakes for E5; Lower Left: WEEF Director Praveen Arichandran reports on the impact of WEEF; Lower Right: The Midnight Sun Solar Car Team poses in their bay within the new Student Design Center**

# Your Mileage May Vary: A Look into the Chevy Volt



**JON  
RADICE**  
4A CHEMICAL

It sounded too good to be true. A real electric car was going to get a real chance to crack the market here in the SUV-saturated North America. Chevrolet's latest car, the car that many reporters, at the time of release, said would make or break General Motors, was revealed amidst great fanfare, and even greater mileage. 230 MPG was the number that all the reps were spouting, gas only being used sparingly as a trip extender to get rid of that "short trip" stigma that have plagued electric car concepts in the past. In fact, one of the points that lead GM to receive bail out money was that they were producing an engine where "only the electric drive train would power the car."

Surprise, surprise, this is not the case.

Now before I get into a snit about the lie



**The Chevrolet Volt**

GM-volt.com

(and that really is the heart of the problem) I'd first like to say that from the early reviews, the Volt is a fairly interesting piece of engineering. Sure it's not all electric, but it does have a 40-mile range (more around 35 miles as observed from engineering) where it only uses electricity. After that it's a ten-hour charge before your battery is back to good again. It does get very high mileage even af-

ter the battery is done, around 36 MPG on the highway and 31 MPG on the city streets. But, mind you, this is a 4 door hatchback. Smaller than the Prius, ten thousand dollars more expensive than the (all-electric) Nissan Leaf, the Chevy Volt really doesn't have a market now that it's revealed its true colours.

So what is it? It's not an auto with an all-electric engine; once that battery drains, or

when it goes above 70 miles (113 km) per hour it switches to its gasoline engine. It's really more of a plug-in hybrid, a small step compared to the huge leap promised by GM. The only thing new that it offers to the table is the combination of charging and a hybrid engine, something both Toyota and Nissan are doing much better in their cars.

One has to remember (and if anyone watched the superb documentary "Who killed the Electric Car") that GM has been on the cutting edge of technology before. The same cycle happened with the EV-1, when it never lived up to its initial claims, and ended up being a shade of what it was predicted to be. Given that the Volt will be marketed more extensively than the EV-1 ever was, one has to wonder if it has enough juice to pull GM out of its current slump. Right now, it looks like a few innovations wrapped up in a package that has no target sender. It might not fail, but without major changes, it is unlikely The Volt has much of a future.

## IRS: Who, What, When, and most importantly, Why?

### GRADUATION COMMITTEE 2011

As of Thursday, October 28th, the class of 2015 had ~1562 days to their Iron Ring Stag, or IRS. The class of 2014 had ~1198 days. The class of 2013 had ~834 days. The class of 2012 had ~463 days. And the class of 2011, who are graduating this April, had 100 days to their IRS!

Reaching 100 days is a big milestone. It can mean any number of things to you – it's a sign that the end of your 5 (or 6 or 7) years is nigh, a testament to how far you've come since starting at UW, a reminder of your obligation to uphold the ethics of Engineering, and much more.

The Iron Ring Ceremony, or IRC, is happening on February 5<sup>th</sup>, 2011 for 4th years. As you probably know, engineer-

ing students receive their Iron Ring at this ceremony. The ring is worn on the little finger (aka your pinky) of your working hand, and the unworn facets on the ring act as a reminder of your professional obligation since the facets rub against your paper as you draw or write.

The IRC, also known as the Ritual of the Calling of an Engineer, is administered by the Corporation of the Seven Wardens. The origin of the ceremony can be traced back to 1922 to a civil engineering professor at the University of Toronto, when he convinced the Engineering Institute of Canada that a ceremony and standard of ethics should be instated for graduating engineers. The original Seven Wardens were the seven past Presidents of the Engineering Institute of Canada. The ritual itself was created by Rudyard Kipling.

Receiving your Iron Ring is a proud and exciting moment. It's a moment in an engineer's professional life that should be celebrated – and celebrated it is, with great enthusiasm!

IRS is happening on that same evening: February 5<sup>th</sup> at the Waterloo Inn. GradComm is essentially turning the hall at the Inn into a private club for all newly-ringed grads! Free food is always available, and the hall will be licensed as well. GradComm is also looking into providing shuttle buses to make sure that everyone gets to and from IRS safely. There is a dance floor for those who like to dance, and there will be tall tables for people who would rather relax and chat with their friends in a lounge atmosphere. It's truly an event that everyone can enjoy.

There are a ton of traditions that go along with IRS. For example, attendees wear all-black to the event. Black IRS shorts are provided with your ticket, and are available in a basketball-short style and a shorter athletic style as well. Some 4<sup>th</sup> years like to wear ridiculous costumes over their black IRS clothing and have their friends tear the costume off of them to reveal their black outfit underneath. Scraps of costumes are sometimes found hanging from the ceiling at the end of the night! For everyone who has waited 5 years to touch the engineering mascot, the TOOL: you'll get your chance on the dance floor that night! All in all, IRS is a great night for newly ringed 4<sup>th</sup> years and is always a much-loved event year after year.

**FOR  
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IN FAVOUR  
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GOOD**

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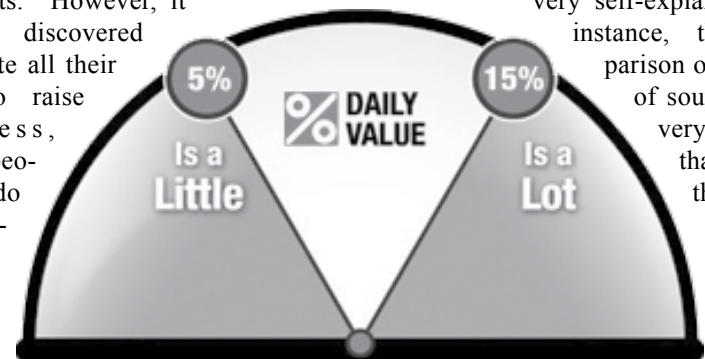
**Visit [www.eng.uwaterloo.ca/~sff/](http://www.eng.uwaterloo.ca/~sff/)  
for more information**

## Health Canada announces nutrition label campaign

**ALLISON NGSEE**  
1A MANAGEMENT

How often have you walked into a grocery store and stopped to look at a Nutrition Facts table? The media is redundant with news about how trans fats and excessive amounts of sodium are bad for your health, and how you should avoid them at all costs. However, it has been discovered that despite all their efforts to raise awareness, many people still do not understand the meaning of these unhealthy components. That is why Health Canada launched a new program, the "Nutrition Facts Education Campaign", to aid Canadians in reading the Nutrition Facts Table.

As their website states, "the Nutrition Facts Education Campaign is a multi-media campaign that helps consumers understand and use the information on the Nutrition Facts table, and in particular, the % Daily Value". On the website, they lay it out very clearly for even the most numerically-challenged to understand. They even include a meter illustrating



their point. However, this meter is very specific and only works for the three food items that they have chosen.

Other interactive resources on the site include how to choose healthier food products, how to compare different foods, and how to moderate your food intake for the maximum amount of nutrients. However, many of their tips are very self-explanatory. For instance, their comparison of two types of soup point out very blatantly that since the former only has 4% trans fat and the latter 17%, the former should be the preferred option. I would hope that Canadians already know that 4 is less than 17!

But Health Canada is taking a step in the right direction, for research shows that with regards to the Nutrition Facts table "more education is needed to help [Canadians] use this information to its full potential".

If you would like more information on this campaign, visit <http://www.hc-sc.gc.ca/fn-an/label-etiquet/nutrition/cons/dv-vq/index-eng.php>.

## Is Mel's Diner Returning?

**KEVIN LIANG**  
IT CHEMICAL

Last April a fire destroyed several businesses in Campus Court Plaza across from The Grill. Tabu, Mr. Sushi, University Vision Care, and Sugar Mountain were all destroyed. The greatest loss to Waterloo students was probably Mel's Diner. All that remained are the black and white checkered tiles that accentuated Mel's Diner's vintage atmosphere. Jerry Smith, owner of Mel's Diner, wanted to rebuild. Smith was able to salvage stools, old photographs, and a jukebox. All will be returned when Mel's Diner reopens.

Smith said he wanted the new restaurant to resemble the old Mel's as closely as possible. He wants customers to return to Mel's and say "Wow, it's good to be home." The iconic Mel's Diner sign was also collected and is currently resting in Smith's garage. The sign is too damaged to use but it will likely be hung inside as a reminder of its tragic past. Smith says he hopes to open on the one year anniversary of the fire. At peak hours, the diner would always reach its capacity. Keeping this in mind Smith is looking to expand from the old Mel's. He is looking to increase the seating area by 30% and the kitchen space by 50%. This will help meet customer de-

mand for services such as catering and take out. Smith says that insurance will allow him to rebuild Mel's to its original state but will need additional funds for the expansion.

This is when Groupvestor contacted Smith. Founded by University of Waterloo students, they knew how much Mel's Diner meant to the community. What Groupvestor does is help small businesses raise funds directly from the community for expansion and investments. Each fundraiser is given a fundraising goal and a timeline. If the project does not reach the goal by the end of the timeline all the money is given back to their respective

investors and the business goes back to zero. Groupvestor was selling floor tiles with personalized messages for \$35, classic Mel's Diner Godfather t-shirts for \$25, gift cards ranging from \$5 to \$74 and a \$100 gift card for \$75, and \$250 for catering services for up to 50 people. Despite appearances on CTV News and the group's efforts to advertise their campaign, Mel's Diner did not meet its \$10,000 goal in the 20 day fundraiser. The return of Mel's is uncertain. As construction has not yet begun on the new building, the one year goal is looking bleak. For more information on the incident please refer to the May 19<sup>th</sup>, 2010 issue of *The Iron Warrior*.

## The Engineering behind Chilean Miners' Rescue



**FARZI YUSUFALI**  
2A NANOTECHNOLOGY

Earlier this month, over a billion people (myself included) watched as the thirty-three Chilean miners who were trapped in a copper-gold mine were finally rescued after spending a record 68 to 69 days underground. The rescue mission's objective was to dive 2,300 feet below the Earth's surface at a distance of about 5km from the main entrance. The challenge was to navigate the irregular spiral turns of the mine (unlike a vertical mine shaft) without disturbing the geological structure of the mountain.

Several institutions including the Chilean government, Codelco, the state owned mining company, NASA and various drilling companies from Canada, Australia, South Africa and the US attempted to find survivors. However, the miners were trapped for a total of 17 days without contact in the mineshaft after failing to escape through the ventilation system. At a risk of causing more geological movement and endangering the miners further, the crew working on rescuing the miners abandoned using the ventilation shaft as well.

Eight exploratory boreholes were drilled in strategic points around the mine to try and locate the miners under the supervision of Engineer André Sougarret, head of the El Teniente Mine of Codelco. Some of the issues during the first phase of the rescue mission were the sensitive nature of the geological formation of the mountain and the rock hardness which caused the drills used to drift from their intended path. The eighth borehole drilled (with a diameter of only 5.9in) finally reached the survivors on the 17th day after the collapse about 20m away from the emergency shelter. A note written by the miners confirmed the survival of all 33 miners reached the surface later that day.

After discovering the location of the miner's emergency shelter, video camera and materials were sent down in 5 foot long plastic capsules called palomas (which means carrier doves) that took an hour to reach the miners through the eighth borehole. The engineers coated these capsules with a gel in order to ease the passing of these capsules through the borehole. High energy glucose gels (to reduce stomach ulcers from food deprivation), rehydration tables, water purification tablets, medicine and oxygen (when there was an air deficiency) were sent down in these tubes. Delivery of solid food occurred a couple of days later after the miners became accustomed to eating more especially after the long period of starvation during the first 17 days. Two additional boreholes were drilled for oxygen and videoconferencing equipment before the start of the rescue operation actually began.

While construction of the capsule used to rescue the miners began, the miners were provided with emergency supplies (some provided by NASA) and devices that imitated life above ground to keep miners' mental health, which at this point was more important, stable. Fluorescent lights with timers were sent down the capsules to imitate day and night so that the miners could have a perception of time. Psychologists believed that the miners should feel in charge of their situation, thus the miners were given the chance to organize themselves into groups that were responsible for various tasks that needed to be completed underground. NASA's involvement in this process was paramount

reached the miners, three plans, being Plan A, Plan B, and Plan C were in operation at the same time. Each plan was tested for its strengths and weaknesses at which the best plan was executed in the miner rescue effort.

Plan A consisted of an Australian built Strata 950 model raise borer type drilling rig that is usually used to create circular shafts between two levels in a mine without the use of explosives. The drill was provided by a South African company and was the first of the three drills to begin boring the escape shaft. The method worked to drill a small hole first in which the large cutters were attached to the drill which stuck out the bottom of the hole. Then, the

to take on the necessary pressure. At this stage, there were many delays; the first was the drill hitting a metal bar and the second was the replacement drill bit wearing out. These delays were all taken care of by using a "spider" to retrieve the metal bar and the drill bit being replaced.

Plan C involved a powerful, Canadian built RIG-241 that had the ability to drill a wide enough escape shaft without the need of a pilot hole. This oil drilling rig was operated by Calgary-based Precision Drilling Corporation which brought debris back up to the surface unlike the other drills. The hardness of the rock and the size of the drill proved to be a major setback due to the constant need to reposition the drill as the drill strayed when trying to drill on the target.

The drill that reached the miners first was Plan B which broke through to the shelter on October 9th. The rescue capsule made while the drills were making the escape shaft was 66cm in diameter; thus, the miners could not have a waistline greater than 90cm if they were to escape the mine. The steel rescue capsules dubbed Fénix 1, 2 and 3 (Phoenix in English) were constructed by the Chilean Navy with help from NASA. 75 of the design features for the three capsules included an oxygen tank, technology to cut down the friction while in the escape hole and the ability for each miner to strap himself in easily. The Fénix 2 used to rescue the miners had an oxygen supply, lighting, video communication, a reinforced roof in case a rock fell and an escape hatch with a safety device to allow the miner to lower himself to the mineshaft if the capsule got stuck.

After the necessary preparation for the extraction of the miners was made, the rescue effort, named Operación San Lorenzo (Operation St. Lawrence) after the patron saint of the miners, began on October 12th. The fittest in body and mind were the first four miners extracted with the least healthy to the healthiest men coming afterwards. The miners were all required to exercise beforehand, eat liquid only diets, to wear sunglasses and wear a girdle at the time of the ascent. The sunglasses were needed to protect the miners' retinas due to the extended period in which they remained in the dark while the girdle was used to reduce the effect of the pressure changes when making the ascent.

The magnitude of international support and engineering prowess for this immense operation was astounding since many different aspects of science and engineering were used simultaneously to allow the miners to escape relatively unscathed. Not only was there support from major corporations and institutions around the world, the emotional support that poured in for the miner's was, in itself, nostalgic. Then again, the miners' ability to work together towards a common goal of survival was, if anything, inspiring.



**A crane lifts a capsule to help rescue miners** costeira.com

since the miners' situation greatly reflected similar situations experienced by the astronauts who have spent months on end in the space station.

The actual plan to get the miners out of the mineshaft consisted of raising each miner, one by one, in specially designed pods. The major constraint surrounding this problem was the size of the hole being drilled and its effect on the instability of the geological conformation of the mountain. Thus, the rescue method had to be meticulously planned since any major error would have seen catastrophic results for the miners.

Many different strategies and materials were used simultaneously to reach the miners. When the miners escape shaft

cutters were pulled up to grind the rock upwards. Since there was no space below the drill, the rig was modified so that it was wider above in order to provide some "give" when drilling around the pilot hole. The debris fell at a rate of 500kg an hour in which the miners themselves had to remove with the equipment they had trapped with them.

Plan B involved a Schramm Inc. T130XD air core drill owned by Geotec S.A (a Chilean-American joint venture). This drill was used to widen one of the three boreholes that were used to keep the miners supplied with palomas. It had to enlarge the hole in three stages where the hole was progressively made bigger. This ensured that the rock formation was able

# The Fantastic Failures of Nobel Prizes



**ANJALI GOPAL**  
2A NANOTECHNOLOGY

Nobel Prizes may be the penultimate achievement for scientists—only next to being crowned the next Albert Einstein, of course—but I'm here to chip away at some of that dearly held glory and wonder that the very word 'Nobel' may instill. Because frankly, the prizes aren't a law; they're not even an art. And many times, the prizes have been a mistake.

First, the laureates. Consider António Egas Moniz. He received his prize for introducing lobotomy—that is, treating patients with psychosis by severing some of the neural connections to their prefrontal cortex. It was a swell technique; previously paranoid and some schizophrenic patients would become lethargic and calm, but only with the additional cost that such patients would never be able to feel anger, or any

sort of arousal, ever again. Neither the Nobel Committee, nor Moniz himself, did substantial research to discover the long-term events of this so-called 'ice pick lobotomy'; Moniz received his prize well before the time when lobotomy was exposed for the disaster that it really was.

But it doesn't stop there. The Nobel Prize committee is proof that history tends to repeat itself, because, they recently picked another laureate without waiting for concrete proof of his accomplishments. I'm talking about Barack Obama, of course. He got a peace prize why exactly? Nobody knows—especially not the Nobel committee. Their 'reasoning' stems down to Obama's "extraordinary efforts to strengthen international diplomacy and cooperation between peoples". Obama's efforts must have been extraordinary indeed, since his presidency term only started two weeks before the nomination deadline. What an inspiration.

Even more heartbreaking are the non-laureates—the people who should have

received Nobel prizes, but didn't. High up on this list is Rosalind Franklin, the one woman that every female biology professor will spew at you about (and for good reason). Franklin was a brilliant scientist who performed x-ray diffraction on DNA to determine its double-helical structure. James Watson and Francis Crick as good as 'stole' this information off her desk, and then claimed to have deduced the structure of DNA. In a real twist of tragedy, Franklin died soon after because of her work with x-ray radiation. Since the Nobel committee doesn't award prizes posthumously, the prizes went to Watson and Crick instead.

And finally, of course, is Mohandas Gandhi. He was nominated for a prize in 1937, 1938, 1939, 1947, and right before his death in 1948. In 1948, it was even strongly considered that Gandhi could be awarded a posthumous award (as per the statute of the Nobel Foundation, which allowed such awards under extraordinary circumstances), but it was turned down anyway for varying reasons. One of these

reasons was uncertainty about where to distribute the prize money should Gandhi be awarded the prize.

Of course, the purpose of this article is not to belittle Nobel Prize laureates, or their achievements. Truly, most of them are well deserved and the prizes do commemorate scientific ingenuity, cultural advances, and hard work. Moreover, it should be noted that the Nobel Prize website did devote a small section of their site to Gandhi, claiming him to be the 'missing laureate'.

Nevertheless, Nobel Prizes shouldn't be treated as 'endgame' or 'the final chapter' or 'the last word in science'. Why? Because it's not. The committee is made up of people who make their own opinions—and so should you. So the next time you hear about somebody getting a Nobel prize, stop to think: most of the Nobel-recognised achievements might be worth it but that doesn't mean that there aren't just as many achievements which aren't commemorated that are also worth it.

## Talk TED Talks: Digital Telepathy: Mind over Motor



**BRENT MCCLEAVE**  
1A NANOTECHNOLOGY

Tired of constantly losing the television remote, or having it be stolen by imbeciles in your residence? How about getting carpal tunnel syndrome from trying to use MATLAB? Well then suffer no more, for Tan Le, the president and founder of Emotiv Systems, has created the holy grail of digital interface technology: a wireless EEG headset, presented at the TED conference during July of this year. By measuring neural impulses and transmitting them to Le's EEG (electroencephalography) software, the headset bridges allows people to interact with digital devices simply by thinking about it, bridging the gap between our consciousness and the digital world, in a manner that I can only describe as a being an awesome combination of science fiction and witchcraft.

A conventional EEG headset is an awkward network of electrodes which are attached to the subject's scalp using a conductive gel or paste, which transmit neural impulse to said electrodes. Putting the headset on is an uncomfortable and time-consuming endeavour, and the whole system itself can cost upwards of ten-thousand dollars. In contrast, Le's wireless headset requires no such conductive gel, is much more comfortable for the wearer, and can be put on in a couple of minutes. But wait, there's more! With prices around several hundred dollars, telepathy with electronics can be fun for the whole family!

A former TED speaker, Evan Grant, was equipped with the device to demonstrate its effectiveness. Grant, who had never been introduced to the device, donned the headset, and in about eight seconds, his baseline brain activity had already been measured and catalogued by Le's headset and software. A screen displaying a floating cube was shown to Grant, who was

told to simply visualize the cube being pulled towards him, out of the screen. Le set her software to measure Grant's new brain activity and catalogue it as "pull." After another eight seconds, the program had become acquainted with Grant's "pull" brainwaves and from that point onward, any time that Grant would visualize the cube coming out of the screen towards him, the cube on the screen would respond accordingly (did I mention that this was tantamount to sorcery?) He was able to control the pull and push motion of the floating cube simply by thinking about the cube moving. A similar demonstration was performed wherein Grant was instructed to think about the cube vanishing from existence (this required significantly more time for Grant to master, as an object simply fading away is too unfamiliar in reality to be able to visualize it without concentrating). However, as a user spends more time practising "thinking" with the headset, the easier it becomes to interact with a digital environment.

This concept of digital telepathy has a myriad of applications in countless fields. First and foremost, with respect to video games, a gamer's facial expression could be used to control the gestures of the player's avatar, or let players more "realistically" control magic/magicka/mana/will/Force/biotic powers/plasmids. By integrating this with real world technology one could control a toy helicopter simply by visualizing it lift off from the ground, or close the drapes or turn off the lights in one's house. Even more inspiring, it has even been experimentally applied to electric wheelchairs for the disabled, who would be able to rotate the chair by winking with the correct eye, or move it forward by smiling. Le's headset heralds a new age in computer technology, allowing humans to interface directly and more effectively with the digital world. Well, that last part isn't completely accurate. By "humans," I really meant cyborgs.

## Where to Live in Downtown Toronto (on a budget)



**AMANDA LEDUC**  
3B MANAGEMENT

So you got a job in downtown Toronto and can't wait for that 24 hour vibe, the liveliness of the city and oh wait, dammit, where are you going to live downtown that won't cost you next terms tuition? Not to worry my downtown-bound students, there are many awesome student housing options available to non-UofT or Ryerson students that won't break the bank.

### Tartu College

Description: Older furnished single-gender-suite student highrise at Spadina Subway Station. I lived here in Winter 2009 and it really grew on me. The bedrooms are tiny, but really efficiently organised and the exterior bedroom wall is mostly window so it helps make the space feel bigger. I lived in a 6-bedroom unit on the top floor so the view was amazing! There are 2 washrooms in each unit and 1 shared kitchen. The unique part about the kitchen is that each person has their own lockable pantry with a mini fridge in it. While most of us didn't lock our pantry, it's a nice feature to have if your roommates are sketchy or you are leaving town

for the weekend and don't want to come back to somebody having dirtied your dishes and eaten your food. Also, lots of UK and Australian exchange students live here so it's a great way to meet new people.

Price: Standard Single is all that will be left and is \$560/month, utilities, internet and weekly common area cleaning included, coin laundry extra

Website: [www.tartucollege.ca](http://www.tartucollege.ca)

### Neill Wycik

Description: Older furnished co-ed-suite student highrise 5 minutes walking South-East of College Subway Station. I have never personally lived here but have had friends who have and said it was awesome. It's a co-op so the price is great, but you have to do contribute 2 hour of your time per month to some activity supporting the facility or its tenants. Most of the bigger rooms are taken, so you'd likely just be getting a standard smaller one. Contact them to have them mail you a paper application, email applications are not accepted.

Price: Single from \$463/month, utilities included.

Website: [www.neill-wycik.com](http://www.neill-wycik.com)

### Campus Coop

Description: Older co-ed furnished houses around the North-West area of the UofT campus. This group owns >20 full

houses around UofT which are completely occupied by students. They have houses in which residents split on groceries and cook communal meals as well as houses where there is no meal plan. It is a coop so the prices are great, but you do have to contribute time to the coop each month. There are very few rooms left for the winter term, so contact them to find out what is available and fill in an application.

Price: Single from \$400/month depending on the house and meal plan, utilities and internet included.

Website: [www.campus.coop](http://www.campus.coop)

The following few places are locations I have looked into, but have never actually contacted or known anybody who has lived here:

### Campus Common

Description: Private 1-3 bedroom student apartments at 50 Gerrard Street. Your best bet for getting 4 months here is to join their facebook group and look for a sublet. I did this twice and both times was contacted by people asap asking full-price, but you can talk them down quite a bit.

Price: I negotiated \$500/month utilities in for a summer sublet (which I subsequently didn't take). Website lists \$747 for a single room in a triple apartment.

Website: [www.campuscommon.ca](http://www.campuscommon.ca)

### New Horizons

Description: Former hotel at Dufferin Subway Station. Varying types of room, check website.

Price: Fairly expensive during school year, rate depends on room type.

Website: [www.studentresidencehnt.com](http://www.studentresidencehnt.com)

### Primrose Student Residence

Description: Section of the Best Western Primrose Hotel used as a student residence 5 minutes walking West of College Subway Station. Typical hotel style rooms and mandatory meal plan.

Price: Really expensive.

Website: [www.torontostudentresidence.com](http://www.torontostudentresidence.com)

You can also try to live at one of UofT's residences. They typical don't admit non-UofT student during school months, but it is worth a try. I've lived at Grad House and Victoria University's Rowell Jackman Hall in summer terms and they were amazing! Its worth checking out the UofT website to see if you can get residence in the Winter Term, though it may be expensive.

Congrats on getting a coop in downtown Toronto and happy house hunting! Feel free to chat with me if you are looking for additional resources on student housing in downtown Toronto (I can be found in Novelties Tues and Thurs at 12:30pm).

# From the Iron Archives

## Course Critiques, Cost of Oil, Value of Education, Saturated Computer and Software Market



**AMRITA  
YASIN**  
4A CHEMICAL

### Fall 1989, October 20

Professor John Robinson of Systems Design replied to an Editorial which claimed that the teaching standards at UW were not up to the bar and that the professors were not concerned about teaching.

According to Professor Robinson this problem is due to lack of appropriate formal feedback mechanisms. Course critiques, in his opinion, are not an effective way to improve the quality of teaching, in fact, that have the exact opposing effect. The reasons being, they are unethical, confusing to professors and negative messages communicated through these critiques were more likely to become “self-fulfilling prophecies.”

Course critiques are unethical because they give students the power to possibly end the professor’s tenure as an instructor, but yield this power without responsibility and accountability on part of the students.

Reflecting upon his personal experiences, Professor Robinson states that the results from the critiques were often contradictory to his perceptions and verbal feedback from the students, while sometimes they restated what he already knew. Moreover, a comparison of the results with older critiques lead to confusion as to what teaching style is better.

Professor Robinson states that he failed to understand how quantifying the professors’ teaching abilities through the critiques’ results, and comparing instructors with each other, is supposed to help these instructors improve their teaching styles. He suggests that, through the years, professors have learnt to ignore the critiques so they don’t lower the teaching quality at UW.

Professor Robinson ends the article by suggesting that feedback should be in the form of an ongoing dialogue between professor and class representatives; saying that communication is an effective way to improve teaching.

Luckily enough for students now, engineering has meetings between class representatives, professors and even the Associate Deans of the departments to ensure that students’ concerns are being heard.

### Fall 1996, November 29

An article titled ‘Get the Shell out of Nigeria,’ written by Tim Wels, 2B Mechanical was published in this issue. Tim Wels mentions that students from UW, WLU and some local high schools protested against the presence of Shell in Nigeria.

According to this article, Shell started operation in the Niger delta region in 1958 and, due to carelessness by the company, the region was suffering from environmental damage. This was putting the lives of the local Ogoni people in danger. Ken Saro-Wiwa began the Movement for the Survival of the Ogoni People (MOSOP) and attracted global attention which forced Shell to temporarily abandon the region in 1993. The Nigerian dictatorship, being funded primarily by Shell, was not happy about it and attacked the Ogoni villages, committing murders rapes and even destruction of houses. The government arrested Ken Saro-Wiwa and 8 other activists without any charges and hung them. It was the one-year anniversary of the unjust death of these activists that was commemorated by the students.

Wels ends the article by saying, “The responsibility is now in our hands to pressure Shell to divest in Nigeria, and show the world that oil is not worth blood”.

First thing that came into my mind upon reading this article is popular fact that fashion industry uses cheap labour in the third-world countries for manufacturing, which

is a violation of human rights. But the industries will continue to do that as long as they have consumers to buy their products.

### Fall 2001, November 2

Daniel Martis, 3B Civil, wrote an article titled ‘UW: Liability over Education.’ Martis starts by saying that he came to Waterloo for the academic as well as practical experience gained primarily through work terms. But an incident made him question the practical value of education.

A professor organized a field trip the CEIT (Centre of Environment and Information Technology) building construction site. The site superintendent was contacted and the only conditions were that the students would sign a waiver form and receive a brief orientation on safety and hazards.

When the administration heard about this excursion they discouraged the trips on grounds of liability. If a student got hurt, the contractors on the construction site would be liable, who would pass that on to UW and UW could potentially spend huge amounts of money in settlements of the ensuing lawsuits. In the author’s opinion this is quite ridiculous, as the students had ample experience with construction sites from their co-op terms.

Martis claims this act of putting emphasis on the very small risk over the potential learning experience as a bad precedent and a compromise on Waterloo’s education quality. Cancellation of such trips when the risk is high was justified but not in this incident. Martis ends the article by saying that he is “at a school educating us at their convenience.”

### Fall 2005, November 2

Francis Hope, 4N Electrical and Gabriel Chan, 2B Systems debate on “Is the computer/software market saturated?”

In Hope’s opinion it was. Computer, electrical and software engineering, all were basically the same thing except mi-

nor differences. In essence, graduates from these departments were all competing for the same job. Hope emphasizes that programming would stay but the reality is that there were way more people entering the market than jobs available for these people. Hope expressed his main concern, “It seems to me that there is more than just one facet to the computer industry, more than just programming... But society and this university seems to fixate more on programming than anything else.”

In Hope’s opinion, computer programming is not a specialization; it is a skill that can be learnt.

On the other hand, Chan argues that the demand for computer-specialized personnel would go up because they are needed everywhere. This demand stems from the socio-economic state of the world. Chan stated, “Capitalism needs a growth model that downplays the effects of overproduction and regulates consumption at a healthy rate while preserving the environment yet keeping as many people happy as possible (i.e. employed),” the solution to which is the software industry. Furthermore, development of new technology would inevitably require rigorous software development. Most of the big companies were housed in USA and they were hitting their saturation level but that did not imply that the worldwide demand would cease too. Chan ended his article by saying, “The dot-com frenzy of the last decade may have been characterized by uncontrolled investment and development, but the next decade will see the maturity and a sustainable and growing software industry.”

Although this question was raised 5 years ago, even today we see computer/electrical/software engineers as the highest in demand. Not everyone will be a computer engineer but being skilled with hardware/software will give a professional a competitive advantage.

# Where to Study: A Computer Lab Review



**MIKAYLA  
MICOMONACO**  
3B ELECTRICAL

Midterm studying is (mostly) over, but there’s still lots of time left in the term. If you’re anything like me, studying at home is a BAD IDEA. I just don’t get anything done. There’s always the libraries but they do unfortunate things like close, and it’s annoying to have to relocate. Therefore, the best places to study, in my opinion, are the 24/7 engineering labs. However, not every lab is created equal.

### Fulcrum (E2-1313):

Fulcrum is, well, one of the older labs left on campus. Its computers are old, there’s no space set aside or available outlets for laptops. The chairs are even tied to the desks, which makes studying with a group interesting at times. However, it does have its advantages. Fulcrum is not one of the more popular places to be on campus. If the newer labs are full, this is the place to find somewhere to sit. Also,

when the newer labs were locked between the end of Spring Term and Orientation Week, Fulcrum is still open. 3/10.

### Gear (E5-2108):

I’ve only been to Gear once, on the day of the Grand Opening, so take anything I say as fairly uninformed. Gear is shiny and new, and has giant computer screens. Almost too big, having that much light shining at me was a bit intimidating. However, I soon began to enjoy its shininess. There’s a ton of space, room for laptops, and the work areas are spread out enough that it should keep the noise level down. On the other hand, we were told that we had to leave, apparently the building closes after 6. I’ve heard this is going to change, but I haven’t been back to check. 7/10

### Helix (RCH-108):

Helix was a depressing lab. In the basement of RCH, with a few computers which barely worked, this was the place to go if you wanted to be alone or almost alone. It’s currently closed for renovations, and I’m looking forward to seeing what it looks like whenever it reopens. ?/10

### Lever (E2-1302):

Lever is another lab which I hope is up for renovations sometime soon. I’ve managed to crash the computers in there by running Firefox. Any lab that forces me to run IE is dead to me... Add chairs tethered to the desks, no space or outlets for laptops, and I really can’t find much to recommend Lever. 1/10

### Pulley (CPH-2367):

Pulley is a small lab, but it was nicely renovated a few years back. Its air conditioned, which is sometimes nice, sometimes freezing. As it’s one of the newer labs, it was designed with laptops in mind, spots with space for your laptops and accessible plugs, or to just spread out your papers. It’s also reasonably quiet, since there isn’t enough space to fit a huge number of people. 8/10

### Wedge (E2-1302B):

I’ve sometimes said that I should change my mailing address to Wedge lab. Some weeks, I think I’ve spent more time in there than I do at my apartment. It’s a newer lab, lots of computers and space for laptops. It’s also big which means there should be a lot of computers avail-

able. Unfortunately, I’m not the only one who likes this lab. During the day it can get insanely busy, although later on in the evenings it quiets down. I can say from personal experience that at 4:30 in the morning during midterm week, it’s pretty quiet. Lately, Wedge’s climate control has been a bit off. The lab has been overheated some days, to the point where staying there is uncomfortable. Most of the time though, this is my second home. 9/10

### Wheel (E2-1308):

Wheel is very similar to Pulley. Much smaller than Wedge, it still has plenty of nice computers. However, there isn’t any dedicated laptop space, which is annoying if you want to use your laptop or spread out textbooks. It’s also often very cold, and it can get noisy in there easily. The computers are less spaced out than Pulley, causing a lot of echoing. 7/10

As you can see, there are quite a variety of labs available for studying (or pretending you’re studying). Whatever you like, from new to ancient, big to small, there are lots of choices to pick from. Go explore them all and find your own favourite!



Photos from left to right: Fulcrum, Gear, Lever, Pulley, Wedge, Wheel.





# Chalk Up Another Presidential Report!



**TIM  
BANDURA**  
PRESIDENT

Hope everyone's midterms went alright. If they didn't, don't despair. A bit of hard work will get you right back into the swing of things (I've previously confirmed this).

Due to midterms, the past couple of weeks have been really quiet. The executives all attended the Mechanical and Mechatronics Engineering Gala. There, we celebrated over 50 years of Mechanical Engineering at the University of Waterloo. Which got me thinking that the Engineering Society is also approaching its demicentennial birthday... I'd like to organize a

small committee to put together a really big celebration for next summer. Come talk to me or email me if you're interested!

Engineering Faculty Council (EFC) is the highest group within the faculty of Engineering before the Undergraduate Senate. I attended the meeting on October 19th. Diane Freeman, the President of the Professional Engineers of Ontario, gave a brief presentation on the future of the engineering profession to the council. Also, the Centre for Pattern Analysis and Machine Intelligence (CPAMI) was created. CPAMI is designed to provide a place for professors and graduate students to conduct research in several sectors related to machine intelligence and interactions with users and the environment. There is opportunity for undergraduate students in third and fourth

year to work their way slowly into studies with the CPAMI. WE Innovate is another opportunity for students to see the research several professors are conducting. Currently there are about fifty exhibits. It's happening on November 4<sup>th</sup> from 4 to 7 PM in Engineering 5.

Sean, Eric and I met with Dean Sedra on October 22<sup>nd</sup>. We provided him with a brief update of the Engineering Society and its daily operations. Due to midterms, Marc and Leah could not join us and we plan to have a more comprehensive meeting with Dean Sedra early December.

Upcoming we have a council meeting on November 3<sup>rd</sup> at 5:30 PM in CPH 3607. Donation proposals will be reviewed then. These donations help student teams and organizations within engineering. I will

be attending Educations and Promotions Committee on November 8<sup>th</sup> and 9<sup>th</sup>. This committee reviews petitions from students and I act as a representative of the student body. Also Remembrance Day is November 11<sup>th</sup>, and I ask that everyone pauses and remembers the sacrifices made at 11 o'clock. We will be holding a ceremony outside of POETS for Remembrance Day.

Finally, I just like to reiterate that POETS and the C&D are closing November 12<sup>th</sup> for the remainder of the term. The asbestos in the ceilings is being removed during this time. Other renovations will be made to POETS and the foyer at this time, including new benches and a sink for POETS! A sink will allow POETS to offer mixed drinks as part of its usual repertoire.

Have a good second half of the term!

## Fire Retardant Fire Sale



**MARC  
TAN**  
VP FINANCE

NO! NO! NO! I've made it to four exec reports. Now the world is really screwed. Hope everyone had a great hell week, and now we're all ready for the next half of term! Some updates about magical things happening in the finances! Let's start with MAGIC MONEYS! Donations are in our meeting TONIGHT!!! So if you are presenting please come out, if you don't present you will have a lower chance of getting your money!

More news! Asbestos going away starting November 15<sup>th</sup>!!! However, this means that we will need to close CPH Foyer, which in-

cludes Novelties. BUT we will have a fire retardant fire sale (asbestos is a fire retardant!) next Wednesday. YAY!!! Come for low, low, low, fire retardant fire sale prices. I guarantee that you will like these prices. Also, after the sale, Novelties will be moving to the back of the Orifice. So if you miss the sale, you can still get great items all through November! Also WE GOT NEW STOCK IN NOVELTIES!!! SWEATERS, SWEATPANTS, GOLF SHIRTS, AND FUN GALORE, so come take a look!

So since I have nothing else, it is story time! The other day, Marc was sitting beside Leah, and she decided to put whole cupcake in her mouth. And guess what, SHE DID IT FLAWLESSLY!!! Liz was trying to encourage Leah on in this entire endeavour. Leah was doing this while writing her exec report too. CRAZINESS!



Exec dressed as fruit salad for Council Meeting 3 Michael Seliske

## Hey All of You Sexy Plummers!



**SEAN  
WALSH**  
VP INTERNAL

Long time no see, huh? Let me see... what to cover? Let's start with the thanks! Thanks to all of the 2012's and 2013's who participated in the year spirit nights and thanks to everyone who came out to Engineering Hockey! To all of you

(especially the first years) who go to Tuesday Glee nights in POETS, you rock and if you haven't yet, you should! I stopped by CPH on Friday and saw all of the great pumpkins being carved, thanks for being a part of the Hallowe'en events in engineering! I hope those of you who went to the Architecture Party this past Friday had a great time and met some awesome Architecture students! Finally, Band Wars on Monday was Epic! Thanks to everyone who played as well as those who showed

to cheer them on.

As for upcoming events, it's quite the list! Curling is this Saturday! I hope you have your tickets because this event is always hot! If you didn't get a ticket and really wanted to go leave your name on the wait list, if I see a lot of you wanted to go but couldn't I will make sure to try for 2 trips next chance we get.

Another Engineering Hockey night is next Wednesday the 10<sup>th</sup> at 9pm.

November 11<sup>th</sup> there will be Remem-

brance Day Ceremonies in the morning and then in the night is Genius Bowl, so get your team signed up ASAP!!

The following Friday the 12<sup>th</sup> is the AHS-Engineering Semiformal. Join us and meet students from AHS at this fantastic Cirque du Soleil themed night!

Also, be on the lookout for another Coffee House, more Frosh Mentoring events, another Engenuity challenge, coloring contests on the Arts Board and keep up the P\*\*5 earning!

## PD Electives, Plan 2015 and Course Critiques...



**ERIC  
COUSINEAU**  
VP EDUCATION

Welcome back to VP-Ed article land, thanks for reading! This is another reminder to enrol in your PD electives this winter if you need to. Since students have a choice in what you take now, we need to enrol. As with regular classes you can enrol on Quest, search "PD" for WatPD courses and search "PDENG" for PDEng courses. Open enrolment started a few weeks ago, so you don't need an appointment to enrol. Please enrol before mid-November, in order to help the program administration allocate the proper resources in time, though you are able to enrol for the whole open enrolment period. More info on these options and electives is available on the WatPD Eng website. If you visit the website you will also find a recording from the forum including both the presentation and question period. Go to [www.watpd-engineering.uwaterloo.ca](http://www.watpd-engineering.uwaterloo.ca)

I submitted a memo to the Dean's office on Oct. 25<sup>th</sup> containing the results of the online survey. There were 305 responses, which is incredible! I'm pretty sure that is some kind of record. For the most part, those who wrote additional comments did so constructively, and I very much appreciated that. The memo contained only the results of the survey because the Dean's office asked that we focus on identifying priorities now, and brainstorming solutions later. I have attached a table with the results from the survey for your information.

Course Critique stuffing party is happening on Thursday Nov. 4<sup>th</sup>, please show up and help out! There is free pizza in it for you! The second round of Resume Critiques will happen on Nov. 9<sup>th</sup>, the time and location have yet to be determined, but keep the date in mind if you need help with your resume. The second academic rep meeting happened on Oct. 20<sup>th</sup>, we had Wayne Loucks (Associate Dean, UGrad) attend. He talked about the role of academic representatives (from the faculty point of view), course critiques, and

answered a ton of questions. I believe that the academic reps really appreciate his willingness to answer any questions that they had, thank you Prof. Loucks! I attended the monthly SUC and CEC meetings in October, and will be attending them again this month. At SUC we moved the late penalty issue back to Engineering, I'll update you more on this after the next

time it is discussed. I unfortunately had to miss the CWG meeting in October due to it happening during one of my midterms, I'm currently working on catching up on that.

Thanks for reading my article, as always if you have any questions or comments, please feel free to send me an email at [asoc\\_vpedu@engmail.uwaterloo.ca](mailto:asoc_vpedu@engmail.uwaterloo.ca)

Goal	Number of 10's	Overall Weighted Priority
Improve Professor Teaching Skills	131	2435
Improve TA Teaching Skills	73	2255
Increase the amount of study space	36	1722
Increase the amount of classroom space	25	1696
Increase the amount of student space	20	1501
Improve/Revamp the IT Infrastructure used by the faculty	59	2089
Expand counselling services	15	1297
Modernize the labs	75	2294
Increased awareness of scholarships	43	1844
Grow the faculty endowment	16	1499

# WEEF Loves You for Amazing Participation Rates!!!



**PRAVEEN  
ARICHANDRAN**  
WEEF DIRECTOR

We really do. WEEF participation rates hit an amazing 85% this term! Congratulations Engineering! This type of support goes a long way and will ensure that WEEF will continue to grow and make meaningful contributions to life in Engineering at

UW. WEEF proposals are in and specific participation rates are now available. See the attached chart for details by class. We have \$60 000 to allocate for this term.

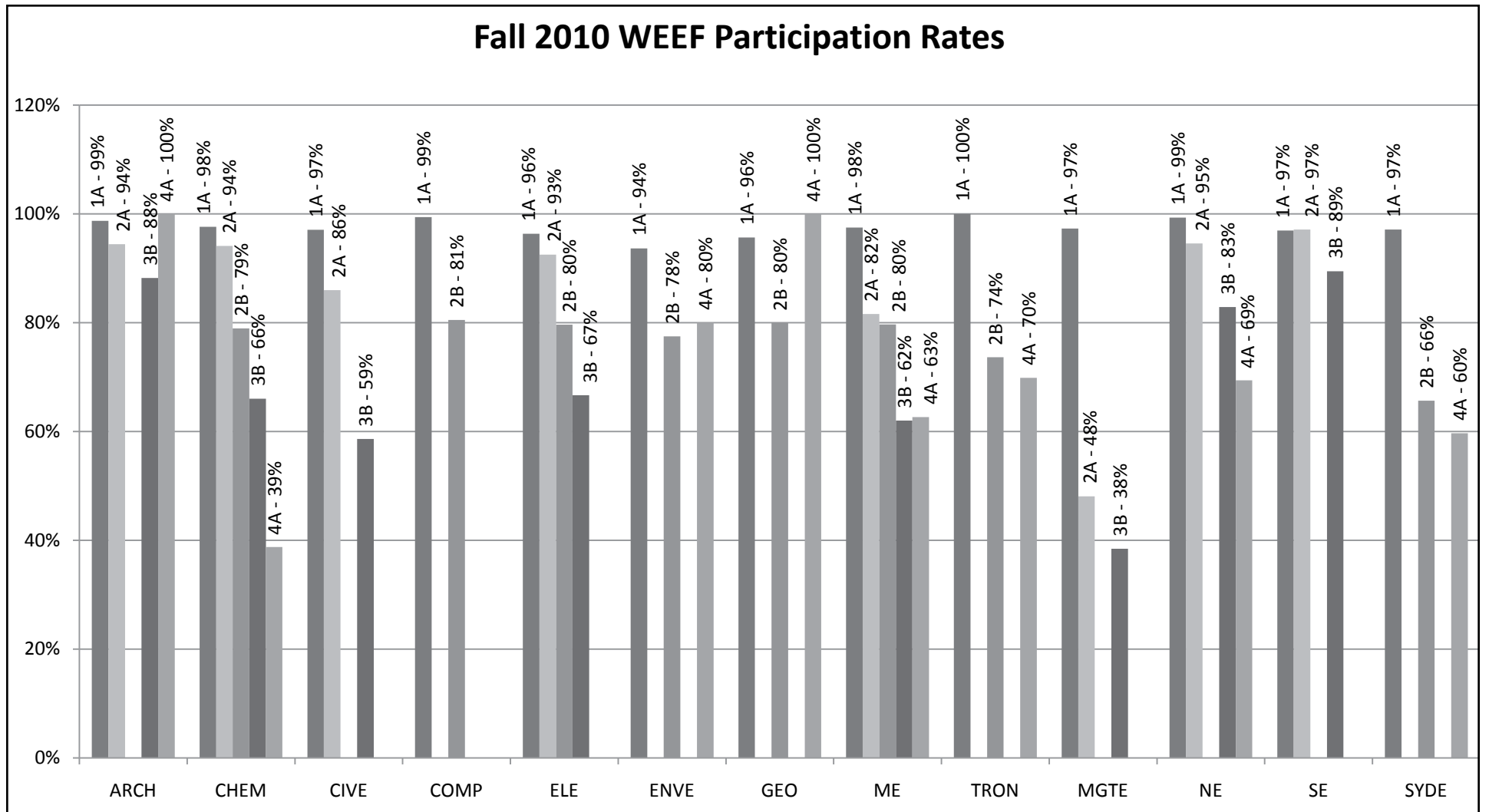
We saw the phenomenal impact that student generosity can have at the E5 grand opening and will definitely continue to build on this with your support! Thank you for everyone who came out to the grand opening celebrations. Our student teams have already begun taking full advantage of the new resources that

are available in our world-class student design centre, including the new WEEF Student Shop.

The next step in the WEEF funding allocation process is that all departments and student teams who submitted proposals make presentations to accompany their proposals at Funding Council. Presentation meetings will be taking place on November 8<sup>th</sup> and 9<sup>th</sup> at 5:30pm in RCH 307. Funding Council will meet once more on November 10<sup>th</sup> to make final funding allocation deci-

sions based on the proposals and presentations. The results of this process are then sent for final approval to the WEEF Board of Directors. We will be making some tough decisions at these meetings so please make sure that your class is represented, so that you have a say in where the funding should go. Dinner will be provided to all class reps.

As always, questions, comments and concerns are welcome. Feel free to contact me at [weef@engmail.uwaterloo.ca](mailto:weef@engmail.uwaterloo.ca).



# Congress, Movember Moustaches and.. A Story!



**LEAH  
ALLEN**  
VP EXTERNAL

Hey All!!  
Hope your Hallowe'en was faaaantastic and your midterms were bearable.  
Little has been happening on the external organizations front lately. As of the time that I am writing this Congress applications are due tonight, but I wrote this last Friday so as of now Congress applications are closed! Also, delegates have been chosen for PEO-SC and we will be travelling to the University of Toronto for November

12<sup>th</sup> to the 14<sup>th</sup>. For NCWIE, myself and a delegation will be travelling to the University of Ottawa on November 19<sup>th</sup> to the 21<sup>st</sup>.

On to charities! This past weekend was Hallowe'en for Hunger. Teams went around to neighbourhoods in the Waterloo region to collect canned goods for the Waterloo Food Bank. ALSO, UOIT has challenged us to a charity hockey game this upcoming weekend! There will be a bus leaving from the DWE cul-de-sac at 6 pm on Saturday the 6<sup>th</sup> of November (with face painting before hand) and will be returning by 2 am. The tickets will be \$15 and will be on sale in the Orifice with all proceeds going to Free the Children. This is a going to be a great game so get your

ticket ASAP!

MOVEMBER HAS STARTED! I better be seeing some stubbly moustaches! Movember is an event that lasts all of November where guys grow moustaches and both girls and guys raise money for prostate cancer research. If you want to participate but have not registered yet please go to [www.movember.com](http://www.movember.com).

The Waterloo Engineering Competition will be happening Friday night and Saturday morning. Students will be competing in three different categories: Junior Design, Senior Design and Consulting Engineering, with the winners of each section will move onto the Ontario Engineering Competition at UWO.

Shadow Day is an event where students interested in engineering will be shadowing an engineering student for the day. It will be happening November 9<sup>th</sup> and 10<sup>th</sup> and if you are interested in getting shadowed please keep your ears open for how to register.

Now, it's story time! Marc Tan (yes, you can't just call him Marc) is currently also writing his exec report and partying it up in the back of POETS to Katy Perry. He is now devouring a pumpkin pie in the pumpkin pie eating contest but getting demolished by Mark Nally (yes, you can't just call him Mark). End of story time.

If you have any questions please contact me at [asoc\\_ypext@engmail.uwaterloo.ca](mailto:asoc_ypext@engmail.uwaterloo.ca).

<b>POETS</b>		<b>MOVIE SCHEDULE</b>		
<b>SHOWINGS BEGIN AT NOON</b>				
<b>Wednesday</b> Nov. 3  <b>2012</b> <b>Babylon A.D.</b> <b>Blade Runner</b>	<b>Thursday</b> Nov. 4  <b>American Pie 1, 2, &amp; 3</b>	<b>Friday</b> Nov. 5  <b>Star Wars Episodes 1, 2, &amp; 3</b>	<b>Monday</b> Nov. 8  <b>Star Wars Episodes 4, 5, &amp; 6</b>	<b>Tuesday</b> Nov. 9  <b>Million Dollar Baby</b> <b>Once Upon A Time in Mexico</b> <b>Blood Diamond</b>
<b>Wednesday</b> Nov. 10  <b>Oceans 11, 12, &amp; 13</b>	<b>Thursday</b> Nov. 11  <b>Knocked Up</b> <b>Across the Universe</b> <b>Into the Wild</b>	<b>Friday</b> Nov. 12  <b>National Security</b> <b>Role Models</b> <b>Swing Vote</b>	<b>Monday</b> Nov. 15  <b>POETS closed for</b> <b>Asbestos removal</b>	<b>Tuesday</b> Nov. 16  <b>POETS closed for</b> <b>Asbestos removal</b>

# Point Vs. Counterpoint

POINT

## Is shipping nuclear steam generators through the Great Lakes waterway a good option?

COUNTERPOINT

**ANGELO ALAIMO**  
3N ELECTRICAL

To give you a little bit of background information, steam generators are a part of the nuclear steam supply portion of the CANDU (Canadian Deuterium Uranium) reactor design. Their purpose is to take heated heavy water (D<sub>2</sub>O) and transfer that heat energy to light water (H<sub>2</sub>O) to the point of vapourisation where it is then fed into a high and low pressure steam turbines in order to generate electricity. If you have taken heat transfer, this is an example of a heat exchanger, albeit a very large heat exchanger.

Steam generators in CANDU reactors weigh 100 tonnes and are as large as a 18 wheel truck and trailer, and with Bruce Power's ongoing refurbishment of Units 1 and 2 of their Bruce 'A' generating facility, 16 used steam generators are currently sitting in the western waste management facility on the Bruce Power site.

So why does Bruce Power want to ship these used steam generators to Sweden for recycling? Well as mentioned, heavy water, from the reactor once flowed through these steam generators and, after around 20 years of service, slowly became slightly irradiated. As such, these steam generators are classified as low-level nuclear waste. Before you get all media poisoned anti-nuclear on this plan, the definition of low-level nuclear waste as defined by the Canada Nuclear Safety Commission (CNSC) is as follows: "In Canada, low-level waste is defined in the following manner: It does not require shielding during normal handling and transport. This is based on a dose rate criteria of two millisievert per hour or less, to distinguish between low and intermediate level radioactive waste." You read that correctly, it does NOT require shielding during normal handling and transport.

Even though the steam generators are slightly irradiated, 90% of the whole generator still has usable metal and can be recycled, in fact, Duncan Hawthorne, CEO of Bruce Power, revealed in a CNSC hearing that only 4 grams of radioactive material is present in each steam generator for a total of 64 grams. Now as mentioned, 10% of the steam generators would still be classified as low-level waste as the internal tube bundles cannot be recycled and must be put back into storage. Let us go over the numbers, what's better - 1600 tonnes of low level nuclear waste or 160? It's

Canada that is going to have to store the 160 tons of left over low-level waste, not Sweden, so what would you prefer?

Now, the plan is to ship them through the Great Lakes, out the St. Lawrence and across the Atlantic to Sweden. Ok, so the ship could sink, the ship could catch fire, and what else? Well not to confuse Bruce Power with the other BP, the amount of pollution and harm to the environment if any of these happened would be absolutely nothing like the Gulf Oil Spill. It's like the difference between accidentally spilling a drop of oil in the ocean versus British Petroleum's millions of barrels spilled.

First off, the ship being used to transport the steam generators is designed to transport Irradiated Nuclear Fuel. You wouldn't even be able to come within one meter of irradiated fuel before getting immediate radiation poisoning causing death. Irradiated fuel bundles are kept under 3 meters of water as protection at Canadian CANDU sites, thus the ship is capable of transporting nuclear waste. Now if the ship sank, the sealed steam generators would still be intact, as they are built solidly to withstand high operating pressures of a nuclear reactor, thus they would survive a ship sinking. If said ship caught fire, the melting point of the steel is around 1500 degrees Celsius. With no combustible material available in the cargo hold of the ship to sustain such a high temperature, no fire would be able to penetrate the stainless steel sheathing and inner tubes. With no penetration of the steam generator, there would be no radioactive material release to the environment. The ship would likely sink before a fire penetrated the steam generators, and even if the steam generators would be submerged in a great lake or the ocean, the vast quantity of water would dilute any contamination to an untraceable amount before being recovered.

In Sweden, recycling nuclear steam generators is not new to Studsvik, the company contracted to do the work. In fact, the company has processed larger, more radioactive steam generators than the ones from Bruce Power.

Overall, the risk (barely any), is worth the benefit at greatly reducing the amount of nuclear waste on Canadian soil for our future generations, therefore, shipping the steam generators through the great lakes waterway, across the Atlantic to Sweden for processing is a good option.

**JACOB TERRY**  
1A NANOTECHNOLOGY

There comes a time when systems have decayed to such a degree that they need removal or replacement. When the old materials are removed, there needs to be a safe and responsible method for removal of these materials. At Ontario's Bruce Nuclear Power Generator on the shore of Lake Huron, two units required refurbishing over the last five years due to age. Sixteen steam generators have been replaced with new ones that extend the life of the system by 25 years. These generators have been slowly exposed to radiation, so when being replaced the old ones are categorized as low-level radioactive waste and Bruce Power is keeping them in storage at the Western Waste Management Facility while they execute their recycling plan. They aim to ship their used generators to Studsvik, an advanced recycling facility in Sweden, for processing. Studsvik will keep the ninety percent that can be recycled, and the ten percent that is designated radioactive waste is shipped back to Canada.

This plan takes care of the environmental problems and safety issues of disposal. Their website (<http://rightthingtodo.ca>) clearly outlines the precautions taken in this procedure and has a video for viewing that describes the process. Is there a way to make this more effective? If there were a recycling facility closer to the station, perhaps in North America, any liabilities that could arise from shipping through waterways would be removed. While this would make the land route longer, Bruce Power claims on their website that they already ship nuclear products across Canada every year and have experience in planning around high volume traffic. Bruce Power also claims the used generators have virtually no radiation exposure to the public during transportation so that would not be an issue. Shipping costs would be reduced and the process would be faster.

A location in the United States would not have to be a far-off solution. In a hearing for the Canadian Nuclear Safety Commission, Studsvik said they have a facility in Memphis, Tennessee, similar to the one in Sweden. Unfortunately, the facility in Memphis and a smaller one located in Irving, Tennessee are becoming increasingly opposed to due to radiation exposure near the fence of the facilities and the violation equal rights labour laws. If Studsvik were able to improve the facilities there, or open a facility somewhere else nearby, this would be a much closer and cheaper option for Bruce Power.

However, if a recycling facility were placed in Canada, there would be even more benefits. The entire process could be contained within the country. Since using the current method still returns waste to Ontario, this method would bring the waste back but also keep the recycled materials in the country, which could be sent back through the Canadian manufacturing industry and by extension, right back to Bruce Power and other Canadian nu-

clear generation stations. If the recycling facility chose to sell the recycled materials back to companies in other countries, then money would still flow into our economy. The Canadian nuclear industry could work together to finance a recycling facility or encourage Studsvik to build one here. This would also help create jobs, which could help combat high unemployment rates.

An ideal solution is not always the most practical one though, so say the facility cannot be placed nearby, and due to an economic, legal or political reasons sending waste to Sweden is our only option. Shipping through the St. Lawrence and Great Lakes may not be the best option. How about a land route to the Maritimes, then shipping the materials from there? The ships used to send the materials could disrupt the usual flow of the St. Lawrence traffic. Unlike land-based routes, there is really only one effective waterway to get from the Great Lakes to the Atlantic Ocean, so other traffic would not be able to find alternative routes. It would also surely be faster to take land to the edge of the continent instead of sending it on a roundabout path through the lakes, which would cut down on shipping time.

In the event that the ships were to undergo some sort of disaster, any materials that would get leaked into the river or the lakes would only further pollute our over-polluted water system. It seems more beaches along the St. Lawrence/Lake Ontario system have to be closed every year from large amounts of *E. coli* and other harmful bacteria and chemicals. More damage to this ecosystem in the event of a disaster, even if it is minor, would be awful considering how much cleaning that specific water system needs.

Whether the facility is located in the United States or in Canada, it would still be a cheaper and closer option than the location in Sweden. If we need to ship the generators to Sweden, why not ship it off the side of the continent instead of sending it through our fragile water system. It would be faster and it minimize the risk to one of the most populated waterways in the country. Canada is already a world leader in nuclear power and generator construction. Why not take this one step further and become a world leader in waste recycling, especially when the waste is so damaging?

**Editor's Note:**

*Point Vs. Counterpoint* is a feature meant to stimulate discussion on thought-provoking topics. The views and opinions expressed here do not necessarily reflect those of the authors, *The Iron Warrior*, or the Engineering Society.

## Come on out to the Fall 2010 Edition of Genius Bowl!!!

Thursday, November 11th at 7:30pm in DC1351.

Whether you enjoy Jeopardy-like game shows or lots and lots of free candy, this is the event for you!

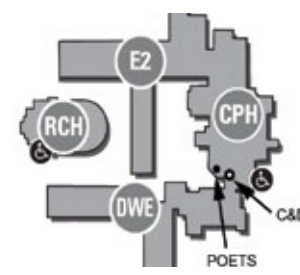
You can make a team and start signing up Monday, Nov. 1st on the Orifice door.

There will be prizes for the top 3 teams as well as spirit prizes throughout the night! Hope to see you all there!!!

## MORE THAN JUST COFFEE & DONUTS

The EngSoc C&D has more than just Coffee and Donuts. Stop by for a variety of freshly prepared sandwiches, baked goods, soups, and more! It is run by students for students, so the prices can't be beat!

There are a variety of specialty coffees available - including fair trade. Bring your own mug to help the environment too!



**HOURS OF OPERATION**  
MONDAY-THURSDAY 7:30AM - 7:00 PM  
FRIDAY 7:30 AM - 5:00 PM

**ENGINEERING SOCIETY**


# Lack of Leadership in Canadian Politics



**MIKAYLA  
MICOMONO**  
3B ELECTRICAL

The Conservatives, as you may know, have had a rough time in office. They had many different problems, Afghan detainees, long form census, G20, you name it. Even now they've continued with their trail of disaster, the long gun registry, their extremely expensive temporary meeting rooms, the failed UN Security Council seat bid. They plough forward, leaving disaster in their wake, and yet the electorate takes no notice.

Polls look like they did ages ago. Sure there's a bit of shifting, but not one of these issues has caused any kind of major shift. Even heavily reported issues like the Afghan detainee crisis, with Canada

being accused of war crimes, or the mandatory long form census cancellation, prompting the resignation of the head of Statistics Canada and outcry from organizations across the country failed to significantly shake Conservative support.

What have the Liberals done amongst these opportunities handed to them to show the Canadian public how they could be a better choice to lead the country? They went on a bus tour. This summer, Harper generated more media coverage by disappearing for a while, than Ignatieff could manage with all his scheduled Liberal Express stops and events. When the Liberals could have been demonstrating their unity and focus, they were disobeying Whipped votes (votes where the MPs are required to vote along party lines instead of in accordance to their own views). They were bringing down their own motions, publicly refusing to support Private

Members Bills proposed by members of their own party, and generally making themselves look incompetent. They can't even manage to handle the Conservatives smear campaign on Ignatieff.

I really wanted to rant at the Conservatives. I'm appalled by the way they've ignored facts, advice and legality in their relentless pursuit of their extremely right wing ideology and politics which are designed to divide the country. However, I feel that the appalling lack of leadership in the Liberal party is a greater threat to anyone who doesn't agree with the Conservative ideology. How can we have faith in the Leader of the Official Opposition, the person who's supposed to be the balance for the Prime Minister in a minority government, to take command when he can't even manage to handle his own MPs?

Ignatieff has had many opportunities

to prove how he could shine as a leader. Instead, he lets Harper blame him for the loss of the UN Security Council vote. The fact that the political divisions and comments made by Ignatieff only came to this supposed international attention because Harper made them a spotlight issue. If the Liberals even bothered to point this out, it wasn't done very well, since all the media was reporting was Harper's accusations.

In short, the Liberal Party is not showing up as a credible alternative to the Conservatives. I wish that I could throw my wholehearted support behind their party, but I find that I can't. I would vote for them, since they seem to be the best alternative, but lately it seems like picking the best of a bunch of bad options. When there isn't a leader or party that inspires any confidence, I despair for the future of Canadian politics.

## In Honour of my Favourite Holiday



**KATE  
HEYMANS**  
2A CHEMICAL

When most people think of innocent happiness, they refer to a child on Christmas day. I prefer to think of those children with lopsided costumes and floppy witch hats who knock on doors with cheeky grins, claiming candy with shouts of "TRICK OR TREAT!" Not gonna lie, I really love Hallowe'en.

I can still remember my first Hallowe'en. I was seven and had never celebrated this very North American holiday before. At first it seemed ridiculous to see the neighbours decorating their house with witches and pumpkins and covering their window in absurd amounts of fake cobweb. Being sort of suspicious, I refused to leave the house without my dad. He had to knock on the first door for me and I probably didn't even say thank-you to the kind person who gave me my first Hallowe'en candy. After a while, I got the

hang of it though. This was easy enough. All I had to do was navigate through the scarily-decorated yards of all these nice people, ring the doorbell and yell something (that to me sounded like "TICK O TEET") and I would be rewarded with candy. I got ridiculous amounts of candy that night. More than enough that the next year, I was ready a month in advance with a costume and an elaborate plan to get the most candy possible.

I feel old when I say that years have passed since then but the years have passed and yet Hallowe'en never fails to cheer me. What other night of the year do people spontaneously all agree to hand out stuff to complete strangers? I think it's awesome. As I got older, I got to experience the magic of handing out the candy. They say giving is better than receiving. It is. And, as an added bonus, if you're handing out the candy then you definitely get to have some of it for yourself. Other events such as Hallowe'en for Hunger also add a charitable twist, allowing everyone to benefit from the holiday. Running around in crazy costumes col-

lecting money or food for other people even gave me a good excuse to wear a costume as I entered my stubbornly mature teen years.

Then come the partying years when wearing a costume on Hallowe'en is cool again. Sure, when you're at university, some costumes are slutty but some are also a ridiculous amount of fun. Personally I got to talk to Superman, Katy Perry and Amelia Earhart all in one night. I love how university students are so ... cultured (for lack of a better word) and you can still be recognised when you dress up as that unheard-of character from the book that no one back home has ever read. It's not just an excuse for costumes and partying either; I know plenty of people who will be once again collecting food for charities or preparing their house for visiting trick-or-treaters. Hallowe'en decorations are so much fun. What other nights can you purposefully scare people out of their wits and then have them admire you for your genius?

I love how Hallowe'en is the one occasion when you can go back to those

childish dreams and actually be a superhero. You can let out your passions and dress up like that unheard-of character from that book you love. I love the funny costumes; the play on words (ever met "shooting star"?); the groups that decide to get together to create a themed group (Snap, Crackle, Pop! Anyone?). Most of all, it's just fun seeing everyone getting excited and happy for nothing more than an holiday, whether it's the little kid with the soon-to-be candy-filled pillowcase or the university student preparing a paper maché prop (you know who you are :P).

Hallowe'en is a holiday where everyone can enjoy the magic without the mandatory awkwardness of being a 'family holiday'. As a last resort, even if you don't appreciate all the silliness, you can still enjoy all the post-Hallowe'en candy sales. Some say Christmas is better because you get to sing carols and decorate everything with lights, but I can't carry a tune and pumpkins are so much cooler, so my favourite holiday will always be Hallowe'en. Besides... it's also my birthday so you just can't beat that :)

## What I Would Do If I Had Money

**HANS BERNARD TEE**  
2A NANOTECHNOLOGY

If I had some extra cash on hand, I would spend it on some decorations for my room. A bare room just looks and feels unwelcoming to go home to. Posters would be the first thing on my list. Let's face it, as a student who has to pinch every penny he can, posters can be quite costly. I would only spend money on them if I had extra cash to burn. Investing in some greenery in the room would also be a nice change of scenery from the typical desk-and-computer scene. Basically, I would invest in anything and everything would allow me to add a personal touch to my room and make it my own, comfy bubble.

**KATE HEYMANS**  
2A CHEMICAL

I'd go on a trip around the world and spare no expense in finally getting to see all those wonderful places I've been dreaming of going to. The Australian Outback and Coral Reefs, the Mongolian Steppes, the Arctic North, the Saharan Desert, the deep Amazonian Jungle... there are way too many wonderful places that I'd love to see. Along the way I'd visit those many friends who just live too far away and whom I never get to see. I would be happy to have the

money to spend a year living among people of different cultures but then I would also need that other thing that students always whine about: time.

**ANGELO ALAIMO**  
3N ELECTRICAL

If I had a couple extra bucks around, to be honest, I would save it for my future. Perhaps even investing some of it to a certain degree in the stock market or some less-risky investing. If something drastic happened to you, do you have something to fall back on other than the bank of mom and dad? I don't, but is something I would like to have.

**FARZI YUSUFALI**  
2A NANOTECHNOLOGY

I would first and foremost buy some good food!! All the food I miss like cheesecake and brownies are crazy expensive here! Without my comfort foods, I feel lost.

After I buy myself some baked goods, I would buy myself a pair of boots because my poor butt can't afford it. Not to mention the fact that the Waterloo winter completely destroyed my shoes. In fact, forget shoes, I would pay my rent first because it really makes some decent sized holes in my pocket, especially when I'm already

broke from first term. Finally, I would buy myself some winter clothes because warmth in Waterloo's winter is a necessity for me.

**MIKAYLA MICOMONO**  
3B ELECTRICAL

If I actually had money, I'd buy books. Not textbooks, I buy enough of those already. I'd buy novels, particularly epic fantasy. I have a list a mile long of all the books I'd like to buy, but I don't actually buy any of them. I'm breaking that rule this week, to buy the Towers of Midnight, book thirteen of the Wheel of Time series, but I wish it wasn't a rule I had to adhere to. After all, who wouldn't want their own personal library full of all their favourite books?

**MADELAINE LIDDY**  
2A NANOTECHNOLOGY

Well, the first question that comes to mind is...how much money? If we are talking \$10 here, then it would be a monthly pass at the Blockbuster that gives me unlimited rentals for the month. Seriously... check it out. However, if we're talking say \$100, well then this, sir, is an entirely different story. There are so many possibilities with \$100. That could be 100 days of

coffee at Tim Horton's, or 200 at the C & D (if I bring my own mug). \$100 can be so useful, just think of how many items you could get. That could get me one video game and perhaps maybe a gamer shirt to go along with that. It could also get me 20 ice cream cones at Marble Slab, 1000 business cards, 30 bags of jumbo marshmallows or 10 slinkys...why? So I can race them of course. Well, whatever your fancy, instead of saving money, sometimes it's appropriate to spend it. So if you find yourself with extra cash, think about your priorities and treat yourself. Live a little!

**KRISHNA IYER**  
2A NANOTECHNOLOGY

If I had more money, I would do a lot more than now. First things first, I would buy myself a tailor-made well fitted Italian suit. There is nothing like a perfectly done suit to exude awesomeness! Further, I would get myself a good haircut. I would like my hair to do something rather than it doing whatever it wants. Additionally, I would buy myself a high definition LCD display for my room so that I can actually watch movies without straining my eyes. I would also consider moving into a newer and better house. Finally, I would also buy myself better shoes. It seems that I never have enough shoes.

## Review Based on the Trailer: Unstoppable



**JON  
RADICE**  
4A CHEMICAL

I could have reviewed a much better movie that was coming out in the next few weeks. I could have chose James Franco's latest film 127 Hours; a tear-jerking story of a mountain climber trapped under a boulder and the sacrifices he has to make to try to get free. I could have looked into Due Date, a movie that looks like it will be a decent buddy comedy that university types would eat up *à la* The Hangover. But sometime you have to review a movie for the greater good. The world has to know about this upcoming movie. Future generations will point their accusatory fingers towards this movie, shaking their heads in despair. Whereas the eighties were mocked for their shitty hair, the nineties for their shitty clothes, the young 10's might be laughed at for their shitty movies

if terrible ideas like this one are allowed to actually see the light of day. Because folks, if you ever wanted to see the most literal example of scraping the bottom of the barrel, I do believe Unstoppable is the movie for you.

Never heard of Unstoppable? Well, you are a lucky one. The movie is about a train. No, wait, it's about Denzel Washington, and Chris Pine driving a train. Frank Barnes (Denzel Washington) is the grizzled vet, the wise know-it-all of the train-yard, taking care of Will Colson (Chris Pine), the fresh-faced rookie with something to prove in the train yard. With Colson's first day conducting a real train, calamity strikes. That train I was talking about earlier? Guess what? No one is driving it! Whoops! What's that? It gets worse? It's hauling a bunch of deadly chemicals, and is going into a residential area? Oh that's terrible, but at least it's not going to crash head-on with a train hauling a bunch of school kids on a field trip. Wait, you say it's on a collision course with a train hauling a bunch of school kids on a field

trip? That's so ridiculously moronic that it isn't even realistic. It's based on true events? Ugh...

I don't know much about trains, but judging by everyone in this trailer, neither do they. This trailer just makes my head hurt. A lot. How does someone lose control of a train? If a train can start on its own, it means that there is some sort of remote control that should have some sort of basic controls. Sure it might not be able to stop the train, but I'm guessing there might be a way to jettison the cargo. The responsible engineer in me would love to comment on the lack of back-up safety systems and how minute details such as the functionality of the air brakes should have been verified, but I don't want to waste my precious typing fingers. Complaining about the stupidity of this movie is useless because that implies that the movie has at least the merit to be talked about.

A four-word description of the movie: Speed on a train. A three-word review for

the trailer: pile of crap. The fact that this got recognizable actors to play in this and that it was not shelved as some straight-to-video garbage release boggles my mind. Speed, when it came out, was a pretty good movie; it got good reviews and held its own enough to have countless parodies and asinine sequels succeed it. The whole speed idea went from interesting to funny, to tired, to idiotic more than 10 years ago, and yet some exec thought this movie was a good idea to throw money at.

Don't even watch this movie for ironic purposes. Don't even go in to it thinking it will be so bad that it's good. Don't watch this movie at all, and this is coming from a guy who paid money to watch Beverly Hills Chihuahua on opening night. My standards are not terribly high, but I have my limits. Unstoppable is a garbage idea, with a god-awful trailer, and will no doubt be a horrid movie. I couldn't even bring myself to make a lame engineering pun because quite simply, the movie ain't worth it.

## The Future of Gaming: The Life and Death of Games



**JON  
MARTIN**  
OBI JON1138

For every gamer there are those spur of the moment purchases of games that may prove amazing, or incredibly horrible. Then there are the games that you anticipate for years, even just for an announcement that development has started. The inevitable waiting during the design and production of the game, and finally – the release. We have probably all had one of those few games that you just have to buy, forgiving shortcomings and disappointments purely because it is a favourite.

That is kind of what I'm going to be talking about this issue, as well as some other things (I'll probably come back and make that list more specific after I've actually figured out what I'm writing about – or maybe not – it adds mystery to the article.

Anyway, that favourite series for me is Fable – I know that it is an Xbox exclusive title, but it still highlights more point. I initially found the first Fable at a game store at a discount – having never heard of it at all and judging it purely by the cover. I loved the story, the combination of melee, ranged

and magic in combat, as well as the combat itself being real time rather than turn-based. I think I have mentioned before how much I hate turn-based combat systems – If I aim the gun and get a perfect headshot I want to see the enemy drop in one shot. Not enter into a stupid battle mode and rely on chance to win – Fire the gun, “You miss”, “You take 50 damage”, Fire the gun, “You miss”, “You take 50 damage” and on and on until you lose. I did NOT miss, I hit him perfectly. Anyway – no more ranting about that. Back to the point of the article, which I haven't determined yet. The creators of Fable – Lionhead studios in the UK – was purchased by Microsoft, making any new games first party instead of third, and giving them a better budget as well.

When Fable 2 was announced I was ecstatic, having finished the first game and wanting to have more adventures in the world of Albion. The second game saw the addition of new mechanics to the game, a slightly different combat system (still real-time, thank you) as well as guns replacing the bow and arrow or crossbow from the first game – for the record cross bows are very unsporting – a good bow is much better for silent kills – while a rifle will draw every enemy in the entire area to come and attack you. The biggest implementation was

a travelling companion – your loyal dog, who would lead you to items and warn you of enemies. The dog was a really great way of adding to the existing game, improving some flawed elements from the first game while keeping to the spirit of the series.

Enough about a specific game, though it will still be the source of examples. A process that is becoming more common in the industry is the use of video diaries, or development diaries as they are often called, short videos from the developers discussing things like the story, characters, weapons, and stuff like that. Also the diaries are often the source of information about new features, instead of the standard boring press release. The Fable series has used video diaries during the development of the second and third games in the series. For the third game, for example, it was revealed that the menu system of the first two games was going to be replaced with a kind of personal lobby style room, where you can walk around and select different items, all guided by your faithful butler. It was also announced that the butler would be voiced by John Cleese, of Monty Python fame.

These kinds of announcements, as well as the regular use of the video diary format, gives gamers a look into the development of their favourite games, as well as making the

years of waiting a little more bearable.

Now, onto the release of the game, and the seemingly mandatory ‘Special Collectors Limited Edition’ version of the game. Of course due to the nature of the development process it really isn't possible to change the game too drastically for a special edition; otherwise they are effectively producing two distinct games. As a result special editions always seem to end up giving you an extra in game weapon, or a different character skin, or some other minor change. The other option is to include different packaging and include little baubles like fake coins, prop replicas, or statues to clutter up your gaming area. Now, don't get me wrong, I like Special Editions – I bought the special edition of Fable 2 – and it was totally pointless. I was going to pre-order the Collector's Edition of Fable 3 – though that didn't work out since I waited until the week before the game came out and all of them were spoken for. Anyway that was my mistake – I just got the regular one because I realized I didn't really care about the ‘collectible’ deck of cards and the fake coin. So that is all I'm going to say about special edition versions of games – make sure you actually care about the extras before you shell out the extra money.

Speaking of pre-orders, that is another issue in gaming, one that can leave you really disappointed. When the Xbox 360 was released back in 2005 I had one pre-ordered through Future Shop (they gave you a toque as a gift – we are in Canada after all). I would have preferred to pre-order at Best Buy because they gave you a baseball cap instead, but it paid off in the end. When release day came there were lineups down the front of stores – people with tents who had been there all night and even longer in some cases – to get one of the limited number of systems available. And that is where the problems started. In most cases stores sold all of their systems in a matter of minutes to those waiting in line, even the ones that had been promised to others from a pre-order. Disappointed customers were informed that they were still required to wait in line, despite pre-ordering the system months in advance. Future Shop was the only store in the area that did not sell the pre-ordered systems; we were able to pick up my system later in the day from the stack set aside for pre-orders. So maybe the toque was worth it after all.

So, that is the end for this issue. Looking back I'm not sure if there really was an overall theme, unless it was the process from development through creation to the final product, as well as the positives and negative elements throughout. So, until next time, Keep on Gaming.

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# The Hunger Games Trilogy I am growing a Handlebar

## Book Review What about you?



**ANJALI GOPAL**  
2A NANOTECHNOLOGY

What do you get when you combine ‘Survivor’, ‘Gladiator Games’, ‘teenage children’? Just about the most brutal (and thrilling) story you can imagine.

Sometime in the distant future, the United States of America has been destroyed and Panem has risen from its ashes. Initially, Panem had 13 districts, which were ruled with an iron fist by the Capitol. When restless and angered citizens from these largely poorer districts launched a rebellion against the Capitol, the Capitol squashed them down, destroyed District 13, and implemented the ‘Hunger Games’. The Games were to commemorate the destruction and death such nasty rebellion can cause. Thus, every year, the 12 districts must send two tributes between the ages of 12-16—one boy and one girl—to a far off ‘arena’, and they must fight to the death.

Before you roll your eyes and move on, let me tell you—this isn’t just another ‘future dystopian America’ story. This is

much better. Most of the book does not revolve around how unfair and uncruel the government system is. The main character, Katniss Everdeen, doesn’t sit around wallowing in her own self-pity. She’s a strong, intelligent, gutsy heroine. From battling wild ‘mutt’ations, to using her wits to brutally murder some of her fellow blood-thirsty tributes, she kicks ass in the arena.

And no, this isn’t some pansy ‘let’s join forces and beat them together’ novel. Rather, it’s all about the suspense.

Suzanne Collins’ world-building is impeccable. From the districts, she indicates echoes of horror as they send child after child ever year. But from the Capitol citizens, there is only wild frenzy and excitement. You see, to the Capitol, this isn’t brutality—it’s just a game. And unlike most authors, Collins’ world doesn’t fall flat with the next installments. Books two and three of the Hunger Games trilogy (‘Catching Fire’ and ‘Mockingjay’) are just as gripping as the first. The third book, especially, with its culmination of the Hunger Games, Panem, and the world—it’s—it’s—

Well, it’s something you’ll get to enjoy when you read it!



**KRISHNA IYER**  
2A NANOTECHNOLOGY

It’s Movember. All you Mo bros and sis’ get ready to flaunt it. As Beyoncé said, “If you got it flaunt it, oh I know you want it.” If you ain’t got it, fret not. It is time to grow the best Fu Manchu coz you know you want to. Everyone has at some point in their life wished they had a ‘stache as bad-ass as Jamie Hyneman. THIS IS THE TIME. Movember is the best time to grow an epic moustache and still be cool. Those who can, do so in order to raise money and spread awareness for prostate cancer. Prostate cancer is the second leading cause cancer death in U.S. men. Common early symptoms include a need to urinate often, difficulty in urinating and pain during urination. You are at higher risk if you are over 65 years old, have a family history of prostate cancer or are of African heritage. More information can be found on the Canadian Cancer Society’s website: [www.cancer.ca](http://www.cancer.ca).

According to the Movember website, “Movember challenges men to change their appearance and the face of men’s health by growing a moustache.” The rules are relatively easy to follow: be clean-shaven on November 1st then let your moustache grow for the entire month. Growing your moustache is meant to be a symbol, like wearing the ribbon for breast cancer awareness, through which awareness and funds are raised for prostate cancer. Like committing to running or walking for charity, the ‘Mo Bros’ (as they are known), make a commitment to grow a moustache for 30 days.

To participate, all you have to do is register online at <http://ca.movember.com/register/> and follow the instructions (the EngSoc team is listed as “UW Engineering”), then go annoy everyone you know and raise pledges to be donated to Prostate Cancer research! Even if you can’t grow a moustache, you can still raise money! At the end of the month, there will be a large Movember party to reward the biggest fundraiser, the biggest moustache, the dirtiest moustache and lots of other great prizes!

## The Campus Survivorman Diet



**ALISON LEE**  
2A NANOTECHNOLOGY

The topic of free food on campus has been reported ad nauseum. Conferences, clubs events, seminars- but what about the apple tree by the colleges bridge, or the leafy greens along the river, or all of those golden dandelions? No one ever stops to consider that you can actually eat a large number of plants that grow on campus. So why don’t we? Aside from the fact that it’s just a little bit strange (and engineers are so normal), people just don’t know anything about the subject. This article is for the little kid in you who used to eat grass, and who still wonders what maple leaves taste like...

The other day I was invited to a campus-wide edible plants tour from the Faculty of Environment’s Ecology Lab. At first I didn’t think much of it, but when I saw that it was at the same time as my calc lab, in which I’m normally hungry, I thought I’d give it a go. Most of the plants you can eat on campus grow in discrete places, like under leaves by the river bank or tangled in thorny bushes, there is no difference between a leaf with a round stem versus a 4-sided stem. To an ecologist, it might mean the difference between an inedible species and catnip. It really helps to search with someone who knows a thing or two about plant species, because even the most distinctly-shaped plants are hard to spot. How was I supposed to know that there was a grape vine growing along the branches of a deciduous tree, and that the grape vine berries are edible “wild raisins”, while the berries from the tree are poisonous? Most of the time, there is hardly any visible difference between edible and poisonous plants. There is also discretion among books and internet sources as to what exactly is and isn’t safe to consume.

So why would anyone bother to eat wild plants at all? Aside from being free, the biggest advantage is that they are extremely nutrient-dense and energy-dense. The reason that wild lettuce tastes so bitter is that it has a much higher concentra-

tion of nutrients than store-bought lettuce. Many wild plants have medicinal properties and are boiled in teas to cure headaches and other ailments. This is also why such plants should be eaten in moderation. Too much of anything is toxic to the body. Wild mustard can add a punch of flavor to a salad, but making an entire salad out of its leaves, pods, and flowers could leave you with your head in the toilet because it’s an emetic. Buckthorn, which grows abundantly in compacted soil such as previously developed land, is also an emetic. Other plants cure fevers in low doses but induce them in high doses, cause skin rashes, or contain high concentrations of soil toxins.

Again, why eat wild plants at all? There are differing opinions on the topic. It is more or less accepted that organic foods are more nutrient-dense than industrially-farmed plants. They don’t rely on pesticides to keep them healthy, and

some people believe that these health benefits are passed on when people eat them. However, when plants grow near railways, roads, or heavily travelled pathways, they are exposed to chemicals and germs that build up daily. You might think that eating these plants is bad for you. However, there are those who think that eating such plants makes you stronger because in order to survive, the plants must contain strong agents that counteract their toxic environments. Troll biology or health breakthrough? You decide.

If you ever are inspired to go hunting for these plants on your lunch break and actually find some, there are a few ways to prepare them. The easiest thing to do is just nibble on whatever leaf or root you’ve pulled. In terms of cooking, they can go into stir fries, salads, soups, stews, and teas. If anything else, it makes for an interesting conversation to point out and eat a seemingly arbitrary leaf while walk-

ing around Ring Road with a friend. You can also make a bandage to cover blisters out of mullaine, a soft ground leaf with antibacterial and antimicrobial properties. Burdock leaves can be used to wrap wild fish and cook over a fire. Maybe, this isn’t something you’d do on campus, but Survivorman would.

I’m not expecting anyone to start harvesting wild plants on campus after reading this article, but it’s just an interesting thing to try at least once. In the end, if you don’t know what a rutabaga looks like, chances are you wouldn’t recognize motherwort or buckthorn either. Also, chances are that if you don’t have time to make yourself a sandwich, you don’t have time to incorporate burdock into a stir fry. Finally, if you like the taste of the cookies at the C&D, chances are you won’t like the bitterness of a dandelion root, but if you never try that maple leaf, you’ll never know what you’re missing out on.

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GUESTS ARE WELCOME WHEN SIGNED IN WITH A UW STUDENT

# Premier League Soccer for Dummies



**KRISHNA IYER**  
2A NANOTECHNOLOGY

It's the lovely time of the year when top level football (and by football I mean soccer) players from around the world gather on the best football field of the world to decide who gets 25kg trophy of sterling silver that is the Premier League Trophy. Often called the greatest show on Earth, the English Premier League (EPL) has the largest audience in the world for a domestic sporting event.

But before I discuss this year's season, it is important to understand the history and the social implications of the English Premier League football. The sport evolved from variations of the present day football. In the mid 1800's, the variations were organized into an official sport starting with the Cambridge Rules. The Football Association was set up and the sport was organized into a nationwide sport. The sport evolved over the ages and became more widespread. It later spread worldwide and the international organization for football administration, FIFA, was set up to regulate the sport.

Despite relatively good performance of the English team in the seventies and eighties, it was a low point in English football. The stadia were badly maintained

and the crowds were unruly. As a result, a lot of English clubs were banned from the European competition. The erstwhile Football First Division which was the top level of English football since 1888, was well behind the rival European leagues in attendance. In the early nineties, with the Hillsborough disaster (resulting in the

season there was talk of setting up a new league that would bring more money for development of football infrastructure. On the 27th of May, 1992, all the First Division teams resigned to form the new English Premier League.

As time passed, the Premier League became one of the most popularly watched

the most famous players in international football play or have played in the English Premier League at some point. Notable examples include David Beckham, Thierry Henry, Didier Drogba, Cristiano Ronaldo, Fredrik Ljunberg, etc. Over the years, the game started being dominated by the just four teams. Since the 1994 win of the Blackburn Rovers; Manchester United, Arsenal, Chelsea and Liverpool have dominated the top four spots and therefore were the only ones who qualified for the UEFA league (the All-European League).

This season looks to be more gripping than ever. With Liverpool behind in rank 17, a lot looks different this time. Chelsea (four times EPL winners) is in the top spot followed closely by Arsenal (one of the most successful clubs in English football which holds the record for the longest uninterrupted period as champions in the English Premier League), Manchester United (18 time EPL champions and one of the historic rivals to Arsenal) and Manchester City (only a recent addition to top flight status). It looks like the EPL is out of the grips of the normal "Big Four" of Arsenal, Chelsea, Liverpool and ManU (what Manchester United is sometimes called). With the last year winner (Newcastle) now in rank 9, this season looks to be very exciting. With an unexpected top-flight line-up, this is going to be unexpected either way.

#	Team	GP	W	L	T	PTS	GF	GA	Diff	Home	Away
1	Chelsea	10	8	1	1	25	27	3	+24	5-0-0	3-1-1
2	Arsenal	10	6	2	2	20	22	10	+12	4-1-0	2-1-2
3	Manchester United	10	5	0	5	20	22	12	+10	4-0-1	1-0-4
4	Manchester City	10	5	3	2	17	13	10	+3	3-1-1	2-2-1
5	Tottenham Hotspur	10	4	3	3	15	11	10	+1	2-1-2	2-2-1
6	West Bromwich Albion	9	4	2	3	15	13	15	-2	3-0-2	1-2-1
7	Newcastle United	10	4	4	2	14	19	14	+5	2-2-1	2-2-1
8	Everton	10	3	3	4	13	10	8	+2	2-1-2	1-2-2
9	Fulham	10	2	2	6	12	12	11	+1	2-1-2	0-1-4
10	Bolton Wanderers	10	2	2	6	12	13	14	-1	1-1-3	1-1-3
11	Sunderland	10	2	2	6	12	9	12	-3	2-0-3	0-2-3
12	Liverpool	10	3	4	3	12	10	14	-4	2-1-2	1-3-1
13	Aston Villa	10	3	4	3	12	9	13	-4	2-0-3	1-4-0
14	Birmingham City	10	2	3	5	11	10	12	-2	2-1-2	0-2-3
15	Stoke City	10	3	6	1	10	10	14	-4	2-2-1	1-4-0
16	Blackpool	9	3	5	1	10	13	20	-7	0-2-1	3-3-0
17	Wigan Athletic	10	2	4	4	10	7	18	-11	1-3-2	1-1-2
18	Blackburn Rovers	10	2	5	3	9	9	12	-3	1-2-2	1-3-1
19	Wolverhampton	10	2	5	3	9	10	16	-6	2-1-2	0-4-1
20	West Ham United	10	1	6	3	6	7	18	-11	1-3-1	0-3-2

Source: Premier League

death of 96 people), safety standards were revised and it was recommended that all the existing stadia make expensive upgrades.

Due to these changes, during the 1991

sports. It provides stiff competition to other European leagues such as Bundesliga of Germany, the Dutch KNVB and the La Liga of Spain. It now attracts leading players from around the world. Some of

## Leafs Talk: Things Look Good...

### ...but Don't Order the Confetti Yet, Mr. Ford



**SPENSER GOOD**  
1A MECHANICAL

So as I sit down to write this article, on the 27th of October, the Leafs are on top of their conference with 11 points and a 5-2-1 record. At this pace they will meet last year's point total, a lousy 74, by their 53rd game and are on pace for a 115 point season. Phil Kessel is on pace for a 74 goal season and supposed third liner Clarke MacArthur isn't too far off pace. Luke Schenn is playing with a little balls and sometimes it looks like Kaberle might actually shoot the puck. And say what you want about Colton Orr's interference with Scott Clemmenson in the Florida game on the 26th, but the puck went in and it counted. All is going well for the Leafs. In fact, I bet the new mayor, Rob Ford, is planning the Stanley Cup parade right now.

Unfortunately, this blue blood fuelled optimism can only carry me so far. But, I guess if I want to be some sort of hockey

analyst, I have to be somewhat analytical, and from an analytical point of view, the Leafs are still not a 100 point team. Hell, they'll still be lucky if they make the playoffs. They are only a tenth into the season and have the better part of 70 games coming their way. True teams prove their worth during the long grind of the season, and if the Leafs want to actually accomplish something a lot of things need to change, and fast.

First of all, what's the deal with Tyler Bozak? Other than scoring a few ugly goals and getting a couple lucky assists he has been a ghost, despite playing 18 minutes a night. If Bozak wants to stay in the big leagues he needs to wake up to reality and realize the NHL isn't college. The kid has got skill, but in the NHL you need some balls too, and so far he's coming up empty in that category. If he doesn't change his game fast he'll find himself playing with the Marlies soon.

And then there is the enigma of Dion Phaneuf. Personally, I think he is another overrated and overpaid defenseman. He's got no puck-handling ability. Phaneuf is

starting to look like a defensive liability and his point shot is terribly inaccurate. He is still better than the complete circus show he has been putting on for the Leafs so far. As of the 27th, he stood at the team's worst; minus 5. He often makes blatant and confusing defensive errors that come off as either laziness or arrogance, or a mix of both. He is supposed to be the Leafs leader, and although I think his skill set is overrated, he needs to at least make an effort, or else the entire ship will go down with the captain.

There is one word that comes to mind that has defined the Leafs two losses this season, and that is apathy. In the Leafs' four wins they looked driven and confident. They were even starting to develop a bit of a swagger. Yet, during their losses they looked like a bunch of lazy drunks. Apathy was a huge problem with this team last year, and Ron Wilson needs to keep these guys motivated, because they simply don't have the depth to succeed if they play without drive.

And finally, what is the deal with Carl Gunnarson? I guess his season so far can be summed up in too ugly words: SOPHO-

MORE JINX. I can only hope that a jinx is the only cause of Gunnarson's disappointing play so far, because he's got some serious potential and it would be a shame to see yet another Leafs youngster's career ruined. Do the names Kyle Wellwood, Matt Stajan, Alex Steen and Carlo Coliacavo ring bells, or maybe sirens? Ron Wilson has got to find a way to get Gunnarson back on his game, or else they are going to lose a real asset.

I guess sometimes I can be a bit of a pessimist. The Leafs have looked better in many respects, namely their special teams and goaltending. It also looks like Luke Schenn has fixed whatever was knocking him off his game last year, and Mikhael Grabovski has been very effective. Although I don't expect Clarke MacArthur to score anywhere close to 40 goals, or even 30, it looks like he may have been a pretty lucky pickup this year and he is providing some much needed firepower beyond Phil Kessel. But remember, we're only seven games in, and it's a long ride from here. I guess all I'm trying to say, is that if I were Rob Ford, I'd wait a bit before I planned that parade.



**CHAINS AW**

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#02

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# The Brew Man Group - HighBaller Pumpkin Ale



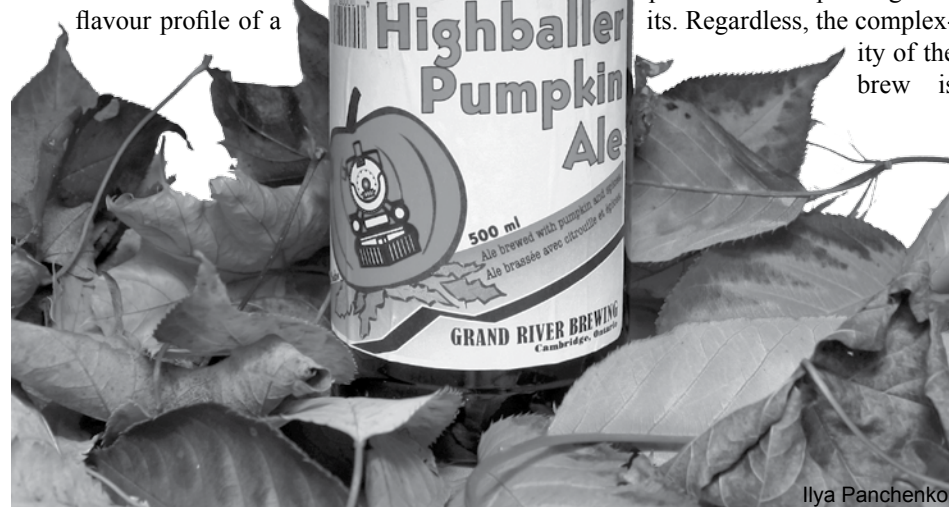
**DAN ARMSTRONG**  
4A MECHANICAL  
**NEIL PARTRIDGE**  
4A CHEMICAL

Pumpkins are indeed a versatile squash. The orange flesh can be pureed and made into a delicious pie. The seeds can be roasted and spiced for a tasty snack. The biggest pumpkins get entered into obesity contests. And once a year, dissected pumpkins get a candle placed inside them to lure children into a sense of security as they approach strangers for candy. One of the lesser-known uses for pumpkin, however, is beer. Pumpkin ales are quite common amongst craft brewers, with the LCBO having picked up several for this year's seasonal Halloween release. One of these comes from the craft brewery in closest proximity to our University, Grand River Brewing in Cambridge. (No, Brick is not a craft brewery.)

**Neil:** For one so close to home, Dan and I have somehow avoided a beer review from Grand River. Perhaps it's because their mandate is to create tasty beer with under 5% alcohol, which adheres to a reserved and ethical mindset when it comes to beer consumption and not "over-indulgence." Yes, I bet the LCBO <3's Grand River, and most likely Grand River appreciates the lower cost of brewing (aka. increased profits) associated with a minimal malt bill. Regardless of the percentages, Grand River Brewing has turned the heads and hearts of many Ontario folk in their three short years of business. Stationing themselves in a renovated 20<sup>th</sup> century industrial building (the former Galt Knife Company) in local Cambridge, their original regular lineup has been crafted to complement the natural water hardness of

the area, namely the Plowman's Red Ale. Since then, however, locally famed brew master Rob Creighton (past experience at Labatt, Lakeport, F&M, Upper Canada, etc.) has been flexing some creativity in the release of several seasonal beers, one of which is the Highballer Pumpkin Ale.

**Dan:** In their original incarnation, pumpkin ales can be traced back to the settling American colonies. When first wandering North America, barley was reportedly quite hard to come by. Unwilling to ditch their hard-rooted beer drinking habits, the clever Brits-turned-Americans resorted to alternative sources for the sugars necessary in brewing. In addition to molasses, parsnips, and corn, one of the sources was the juice extracted from mashed pumpkin. Regardless of the sugar source, the goal was simply to make a drinkable beer (with it being the safer alternative to water, at the time). In contrast, while still throwing chunks (or cans) of pumpkin into the boil, the goal for most modern pumpkin ales is now to simulate the



Ilya Panchenko

pumpkin pie, through the additional use of nutmeg, cinnamon, all-spice, vanilla... and whatever else is in your mom's pumpkin pie recipe. While beer + pie may or may not sound like a great combination, I assure you, the results can be fantastic, as exemplified by favourites such as Southern Tier Pumking (a 9% pumpkin beast) and St-Ambroise Citrouille. Let's see how the 5.2% Highballer from Grand River stacks up.

**Neil's thoughts:** Pouring this beer out into the glass reveals a copper-aurburn elixir of a pumpkin brew. The ghostly white head froths up and lingers (almost hauntingly) for several minutes until finally settling back. The nose is similar, in another's words, to Starbuck's Pumpkin Spice latte. Overall it seems like a pretty profitable idea to base a beer around, given I probably invest as much money weekly into Starbuck's as I do groceries (a sample population of one is a pretty accurate indicator, right?).... Oh my, apparently I need to practice better spending habits. Regardless, the complex-

ity of the brew is evident, where I find malt and spicing (cloves especially) in good proportion. This beer is quite quaffable, however one aspect I would personally like to see changed is the mouth feel, wherein a heavier malt body might reflect and complement the harvest season. Overall, this brew lived up to more than my expectations (which were quite low for a vegetable beer), but I still believe it has more potential in years to come. Give it a try and you'll soon agree. [3/5]

**Dan's thoughts:** Although the label on this beer isn't the most attractive (Grand River really needs to hire a graphic designer), the beer itself pours a beautiful crystal-clear orange/aurburn. Taking a quick whiff from the puffy white head assures that this is going to be a spicy beverage experience. Cloves dominate the nose, but nutmeg and roasted pumpkin both play a strong role in the flavour, which ends in a light, spicy, and lingering bitterness. An enjoyable tasting experience and a well-crafted brew, but this is not quite what I look for in a pumpkin beer. Some people prefer them with subtle spicing and a light body. I, on the other hand, prefer my pumpkin beer to be as thick as the dessert that inspires it, complete with rich, full, spicy sweetness. Grand River's Highballer, with its thin mouthfeel and somewhat excessive carbonation, lands somewhere in between these two extremes. I'd happily drink it with a turkey dinner, but I'm gonna need something with at least 50% more balls to pair up with a hearty slice of pumpkin pie. Still, this one gets marks for being pretty damn delicious in its own right. [3.5/5]

Recommended for consumption. Also seek out: Southern Tier Pumking, St-Ambroise Citrouille, Dogfish Head Punkin Ale

*Props to hops // Dan and Neil*

## A Trip Down Memory Fall



**CHAD SEXINGTON**  
4.5X MANGINEERING

Hey there Sexy Readers!

Did you get all dressed up for All Hallows Eve this past weekend? Maybe you went to a spooky sexy party, or a Hallowe'en haunt? Perhaps you partook in a mock zombie apocalypse and saved the word with a chainsaw, watched scary movies, or put on a suit of solid gold. However you celebrate, it's easy to argue that October 31<sup>st</sup> is one of the most fun days of the year (even though Hallowe'en seems to extend a few days before and after now). But remember how much fun you had as a kid? Go back to the time when you were young, dressed up as a cowboy/robot/ninja/princess, and ran from door to door yelling the magical words "trick or treat", always expecting

treats, but sometimes getting tricked. Remember how much fun it was to get your favourite candy? How lame it was when you got handfuls of candy corn or even an apple?

Well, there are a few staples of Hallowe'en that any kid loves to get in their pumpkin shaped satchel of snacks, and Chad Sexington is no exception. Even though you're not a kid anymore, it's still possible for you to enjoy these tasty treats in plenty. After all, you're now the proud owner of a door, and all you need is a street with some kids to use as an excuse to stock up on Hallowe'en candy that you really like that you can 'give out' to 'trick or treaters' when they come to your door. If you're in a bind as to what to grab, check out these chewy candy treats, many of which are a personal favourite of the Chad Sexington and are loved by kids everywhere.

### **Peanut Butter Cups**

Perfect for kids who aren't allergic to

peanuts. But since you can't tell who is and isn't these days, you might as well keep these for yourself.

### **Licorice**

Be sure to get the very long kind. Cherry is the best flavour, but if they're over 6 inches long, kids could get hurt if it gets wrapped around their neck. Better keep those to yourself too just in case.

### **Cans of soft drinks**

These are one of the most prized possessions of children everywhere. A can of pop is like the gold brick of trick or treating. I remember comparing brands and flavours with friends as a kid, like they were some sort of cylindrical collectable card game. You might need to help yourself to a few of these caffeinated colas in order to keep yourself perky for the night.

### **Bags of chips**

Salt n' vinegar, ketchup, and BBQ, all in those tiny little bags. These are undoubtedly the most delicate of treats. Kids will hoard and savour these bags of chips for a

long time, rationing them out for lunches and movie nights for almost a month. It's a good idea if you crack open a few bags just to check for freshness using a good statistical model. You wouldn't want to give out stale chips after all.

### **Chocolate bars**

The most scrumptious selection of chocolate bars is a staple of Hallowe'en. The best part about these is the bag you conveniently 'forgot' to give away because you left it under the table.

Yes sexy readers, Hallowe'en is quite the 'Holiday' no matter what you get up to. But while you're enjoying your next one responsibly, just remember how much magic the night holds for the young and old alike (especially those parents who dip a little into their kid's candy stash) and how you always felt the rewards of your hard nights work. It truly is a spooktacular night.

Until next time,  
Stay Sexy.

## Thumbs Up/Thumbs Down



Thumbs down to the cold weather



Thumbs down to Hallowe'en food babies



Thumbs down to failed midterms



Thumbs down to raking leaves



Thumbs up to 30 years of *The Iron Warrior*



Thumbs up to surviving Hell Week



Thumbs up to Caesar Martini's \$3.99 Sunday Breakfast



Thumbs up to CPH statue staying purple.



# The Iron Crossword

**STUART LINLEY**  
2A NANOTECHNOLOGY

1	2	3	4	5		6	7	8		9	10	11	12
13						14				15			
16						17				18			
19					20			21	22				
			23				24						
25	26	27		28		29			30	31	32	33	34
35			36		37			38		39			
40					41				42		43		
44				45		46					47		
48					49		50			51		52	
				53		54			55		56		
57	58	59	60					61			62	63	64
65						66	67			68			
69						70				71			
72						73				74			

# The Iron Sudoku

**ANGELO ALAIMO**  
3N ELECTRICAL

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

**Across:**

- 1. Unwieldy fire
- 6. First Nintendo home console
- 9. Institute of Materials Research and Engineering
- 13. To make tardy
- 14. Type of welding
- 15. Fe/C alloy
- 16. Orbit trajectories
- 17. Imperial pressure
- 18. Like Australia, once
- 19. Our illustrious president (on stream): Tim \_\_\_\_\_
- 21. With 67-down, a Waterloo student racing team
- 23. Exist (pl.)
- 24. Part of WRTT (Engineering Jazz Band)
- 25. Raisers
- 28. One of 5 greats
- 30. Perfectly calm
- 35. "The Telltale Heart" author (1st init. and last name)
- 37. Coffee pots, perhaps

- 39. Four door
- 40. It can be objective or corrective
- 41. Negative, when speaking to a sergeant
- 43. "OMG!"
- 44. Ridicule
- 46. Atmospheric phenomenon: La \_\_\_\_\_
- 47. Kent's girl
- 48. Statistical dispersion
- 50. Acid drugs
- 52. Rouser without all of those silly vowels
- 53. Ready for eating
- 55. XXIV/XIII
- 57. Engineers who know their periodic table will receive these just before graduating
- 61. Author of "The Ritual of the Calling of an Engineer"
- 65. Wear away
- 66. Enzyme suffix
- 68. Spanish for "By the"
- 69. Recorded
- 70. To pass by one circuit

- 71. Dodge
- 72. Out of port
- 73. Greeted
- 74. Actress Witherspoon

**Down:**

- 1. Terrifying slime "The \_\_\_\_\_"
- 2. Molten earth
- 3. tan-1(x)
- 4. Link's princess
- 5. Make certain
- 6. Californian valley
- 7. Ums
- 8. Like Star Wars or Firefly
- 9. Object
- 10. Options list
- 11. Not complex
- 12. Singer Fitzgerald
- 15. Sessions of overindulgence
- 20. TV seen before
- 22. Buddhist mantras
- 24. Type of engineering strength
- 25. Changes state from solid to liquid
- 26. Silence: Not \_ \_\_\_\_\_

- 27. Detection by sound
- 29. Composition of 57-Across
- 31. Homonym of 11-down
- 33. Indian breads
- 34. "\_\_\_\_\_s Game" (1985 novel)
- 36. French feminine noun suffix
- 38. Wrongdoings
- 42. Circle characteristic dimensions
- 45. Worked for and received
- 49. Delve
- 51. One drinking from a straw
- 54. Biblical song
- 56. ...Skinamarinky dinky doo, \_ \_\_\_\_\_ you!
- 57. The cheese that tastes betta
- 58. Historical periods
- 59. Catch by lasso
- 60. Thought
- 61. Held onto
- 62. Dies \_\_\_\_\_
- 63. Flanders and Kelly
- 64. Musical TV
- 67. See 21-Across

**THE IRON INQUISITION**  
Lucas Lim, 1A Nanotechnology

## "What will you do now that midterms are done?"



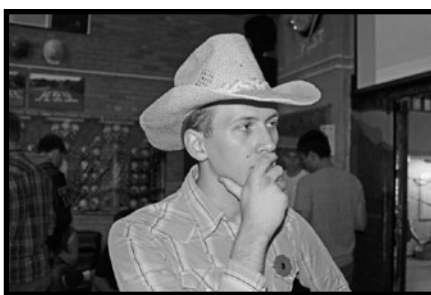
*"Get caught up on TV shows"*  
Anish Bhutani, 3B Chemical



*"Try, try harder and then celebrate"*  
Catherine Declaro, 1A Mechanical



*"Partayyy"*  
Cara Kennedy, 4N Civil



*"Sleep more"*  
Stuart Pearson, 3B Civil



*"Go take midterms that I am not supposed to do for fun"*  
Jining Huang, 1A Nanotechnology



*"Drink heavily"*  
Mike Seliske, 2B Computer