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THE IRON WARRIOR

THE NEWSPAPER OF THE UNIVERSITY OF WATERLOO ENGINEERING SOCIETY

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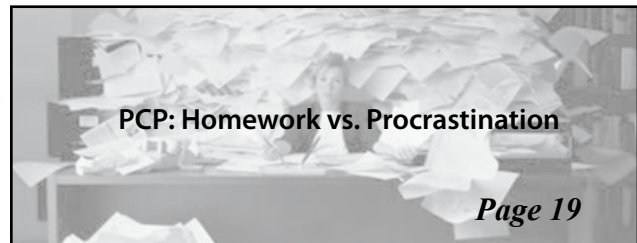
Protect Your Bicycle on Campus

Page 11



Rick Mercer Rant - Teen Suicide

Page 4



PCP: Homework vs. Procrastination

Page 19

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TEDxUW – Catalysts for Tomorrow

AMER ABU KHAJIL
3B CIVIL

Bringing TEDxUW to the University of Waterloo was no easy feat. After 8 months of rigorous planning, the dedicated leadership and volunteer team managed to shape an idea written on a piece of paper into a fully formed, seamlessly executed TEDx event.

TED is a non profit organization focused on “ideas worth spreading” from a diverse set of disciplines. The “x” in TEDx stands for independently organized TED event. This TEDxUW event was the first of its kind at the University of Waterloo, bringing speakers from various walks of life. Each shared a message, idea, or plan of action to motivate the attendees and viewers to be “Catalysts for Tomorrow.” The event gave 100 attendees the opportunity to be present at Hagey Hall for the live presentations; live streaming stations were also provided at the Student Live Center and Davis Center for public viewing.

The amazing factor regarding this event was that each speaker had some link to the University of Waterloo, whether they were alumni from undergraduate programs, graduate programs, or professors at the university.



Paulom Shah

See TEDxUW Page 4

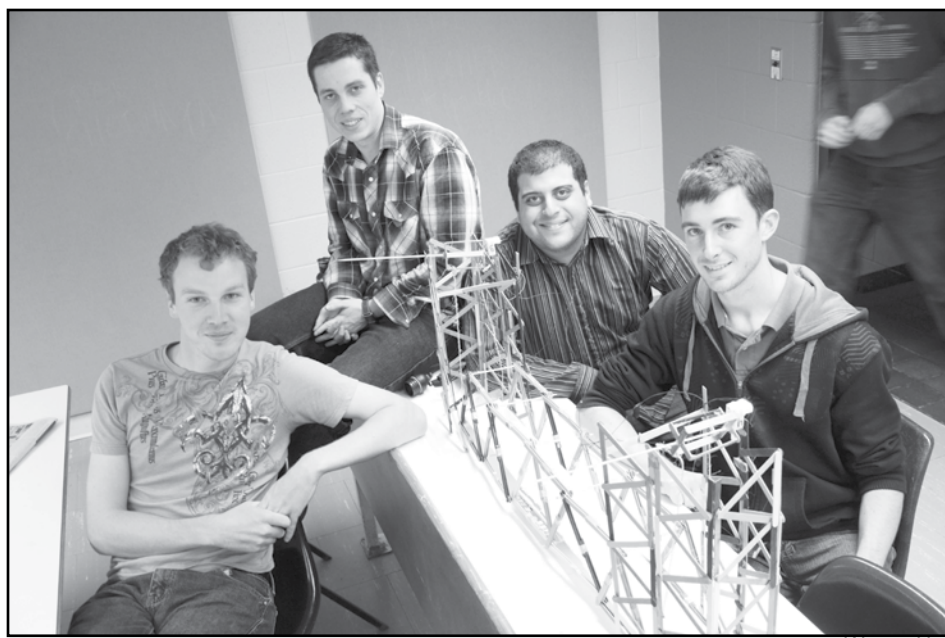
TEDxUW Organizers with event chair, Pranshanth Gopalan

Students Showcase Engineering Talent at the Waterloo Engineering Competition

ANGELO ALAIMO
4N ELECTRICAL

The 6th ever Waterloo Engineering Competition (WEC) was held just over one week ago, testing the creativity, teamwork, and engineering skills of students. In less than 19 hours, teams had to solve an engineering design problem, create a prototype/report, and also present their solution to judges in order to vie for a spot to represent the University of Waterloo at the Ontario Engineering Competition (OEC) being held at the University of Toronto this upcoming February. This term's competition had record participation with 40 teams signed up across the three competitions and 9 more left on waiting lists. Over 185 people were involved with the competition this term – making it the largest WEC ever. The competition has steadily grown over the last couple years and will likely continue to grow in the future.

The competition structure is split up in several different sections. First, the problem is released to teams during the welcome and briefing stage of the competition. The problem is read out to competitors and then teams have the opportunity to ask questions relating to the problem in the remaining time during this section. After the welcome and briefing stage, teams are placed into lecture halls around the engineering buildings where they work on their problem. For Junior Team Design, teams are required to develop a working prototype and presentation within a 4 hour time limit. The Senior Team Design delivera-



Wayne Hsu

A Senior Design team poses with their prototype at the end of the build stage of the Waterloo Engineering Competition

bles are the same as Junior except the design and build stage is extended to 6 hours. For consulting engineering, teams are required to deliver a 15-20 page report and presentation by the end of the 6 hour design period.

For Junior Team Design, teams were required to transport water or sand from the top of an inclined platform and deliver it to the “bottom of the hill” to put out a simulated house fire. Although this may seem easy, the problem required teams to pick up the resources and deliver them all with just a single touch to a release mechanism. Teams

used everyday basic household materials to build their prototypes that they had to assemble within a 4-hour design and build period. Most teams did end up with a moving prototype, but the challenge proved extremely difficult for the junior level with no team being able to extinguish the flames on presentation and demonstration day.

The problem given to junior teams was a modification of an OEC problem from a few years ago when OEC was held at the University of Guelph. In the OEC problem, teams had to transport water from a reservoir at the

top of an incline to another reservoir at the bottom of the incline.

In Senior Team Design, teams had to develop a bridge that would open and close closest to 5 seconds, hold weight, and withstand lateral force. The problem given was much easier than the Spring problem with most teams able to create a working prototype in the given 6 hours. Teams were required to meet specific design constraints for holding weight and withstanding lateral force. Once teams met the minimum design constraints for holding weight and lateral force, teams were awarded half the available points for the given criterion on the marking form. Teams were then allowed to add additional weight and were awarded points scaled according to the rest of the competition.

Lastly, for consulting engineering, teams were given a transportation-based problem revolving around a real-world problem at the University of Waterloo. Teams had to evaluate vehicle parking at the University and develop a near, short, and long term solution. Teams were given actual data from Parking Services to help develop their reports and presentations that needed to address the main stakeholders of the University. After 6 grueling hours of design, teams submitted their reports and then spent the next couple hours practicing their presentations with whatever energy they had left before catching a few hours of sleep.

See WEC Page 4

Letter From the Editor

Book to Movie Adaptations, the Good, the Bad, and the Ugly



JON MARTIN
EDITOR-IN-CHIEF

Have you ever had a book or comic that you really enjoyed, wished for years that there would be a movie adaptation, then regretted that wish the moment you actually saw the movie? I'm sure I'm not the only one who feels like a lot of movie adaptations fail to capture the spirit of the original work, so that's what I'm going to be talking about for this letter from the editor.

The first example that popped into my head was the Hitchhiker's Guide to the Galaxy, which actually has one of the most convoluted development arcs of any fictional work. If anyone has ever seen the 1981 BBC TV show, you would probably be amazed at how perfectly it adapted the original two books, with dialogue almost word for word, and the pacing the exact same (just ignore the horrible effects). The books were actually based off of a BBC radio drama written by Douglas Adams, and broadcast in 1978, then the TV show followed after that.

In 2005, a big screen adaptation was made, featuring a couple of cameo's of actors from the show. One of my favourite things about the movie is the casting of Alan Rickman as Marvin, the Paranoid Android. Some people don't like the movie as it seemed to take inspiration from the first book, but didn't really follow the plot line or even centre around the same goals; characters and alien species which received passing reference in the book became the central antagonists of the movie. As a stand-alone movie, the H2G2 is a good movie that has the same manic "make it up as you go along" style as the books, as it should considering Douglas Adams, the author of the books, co-wrote the screenplay. But as an adaptation of the book, it definitely falls short. Back to the story of the books for a minute. Following the completion of the trilogy with the third book, 'Life, the Universe, and Everything' Adams then continued the 'trilogy' with another two books. Before completing the sixth book in the trilogy (yes, he still referred to it as a trilogy) he died. Recently the book has been completed based on his notes, by the author of the Lemony Snicket books. I still haven't read this book as I am a little apprehensive of the new author.

This links into my next point nicely, though I'll explain that in a minute (oooh, suspense). Most people have heard of the Jason Bourne movies, starring Matt Damon. This series of movies is loosely based on the Bourne Trilogy by Robert Ludlum. I say loosely because they movie basically used the name and some of

the locations, but that's about it. Here's a quick comparison - Spoilers.

Book Series:

Jason Bourne wakes up from severe injuries with amnesia, not knowing who he is or where he comes from, but with some garbled memories of assassinations and covert government training. Following clues he travels to Europe to find out who he is, there he meets a brilliant French-Canadian, government economist named Marie St. Jacques. Jason drags her along as he is being chased by an assassin named Carlos. Over the course of the book Jason eventually finds out that he is not an assassin, but a government trained soldier who was supposed to pose as an assassin to lure out the Jackel. In the end he almost manages to capture the Jackel, but he escapes. Jason and Marie get married and Jason begins to start a new life after recovering a part of his memories - including his real name, David Webb.

The second book (Bourne Supremacy) has Marie, get kidnapped and David/Jason having to jump back into the world of espionage to rescue her. In the third book (Bourne Ultimatum) Carlos returns to seek revenge on Bourne, by attempting to kill his wife and children. A globe-trotting adventure ensues, with Bourne eventually killing Carlos and finally being able to abandon the life of Jason Bourne and live out his life with his family.

Now, the movies:

Basically Jason Bourne IS an assassin, but a rogue assassin of the US government. After failing to complete a mission and being severely injured, Bourne is left with amnesia and goes to Europe to find out who he is. There he meets a German con-artist named Marie Kurtz, who he drags along for the adventure. Bourne kills everyone who comes after him until he hunts down the person who trained him and kills him too. Then he and the woman go into hiding in the tropics.

In the second movie Marie is shot and killed by US agents, Bourne goes on a rampage and kills them all.

In the third movie Jason is attacked by US agents, he goes on a rampage and kills them all, ending with him finding out that his real name is David Webb.

As you can see the movies abandoned the entire Carlos storyline, then killed Marie, so the second and third movies then had entirely new story lines, just borrowing the names from the books.

This kind of thing really bugs me, because the creators of the movies didn't even care about the original story. Instead, they wanted to tell their own story and this novel series already had a lot of fans - so why not capitalize on that to gain an initial audience?

I recently learned that there was actually a

made-for-TV movie adaptation of the original book produced in 1988. Apparently this version was much more true to the book, but ends the Carlos storyline within the movie rather than leaving it open to adapt the other two books. Needless to say I have ordered this movie and am looking forward to seeing a better adaptation of one of my favourite books.

Here's where that link to the H2G2 series comes in, as the Bourne series actually continued after the death of Robert Ludlum and his original three books. Ignoring the fact that the trilogy ended leaving no loose ends, there are a further six books in the series written by another author, Eric Van Lustbader.

I have not read any of these books, mainly because they don't really have anything to do with the originals, weren't based on anything from Robert Ludlum, and relied mostly on gimmicks like the "His long, lost son is back, and is actually an assassin".

The next book I'm going to talk about isn't actually a book, but one of the greatest graphic novels of all time - The Watchman. I thought this movie was actually a great adaptation, despite some changes to the ending. The movie had a ton of scenes that were almost direct translations from the comic. I think comics have a benefit over books because there is already a visual that fans have latched onto. You dare to change the costume of a character or a memorable scene, and the fans will never let you hear the end of it. One of the main complaints people had with the movie was that the ending was different from the comic, and the villain was kind of obvious from the beginning.

My last example is the Harry Potter series, which has come to an end this year with Deathly Hallows Part 2. I have seen all of the movies in theatres, after reading each of the books when it was published. My favourite movies were numbers one, two, three, and five, all of which were good adaptations of the books, I'll admit that they had to cut many scenes, but they did a great job of getting across all of the plot points in the time allotted.

Films four, and six are the biggest disappointments for me, as they cut out significant scenes and didn't bother to use the time they had to tell as much as they could, instead they fabricated new, pointless scenes that didn't advance the story or serve any real purpose (Example: the attack at the Burrow in Half-Blood Prince).

I'm always apprehensive of book adaptations, but I always have that hope inside that a director will actually like the book they are adapting and do an actual adaptation, following the plot, honouring the characters, and bringing the original creator's vision to the big screen.

THE IRON WARRIOR

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The Iron Warrior encourages submissions from students, faculty and members of the university community. Submissions should reflect the concerns and intellectual standards of the university in general. The author's name and phone number should be included.

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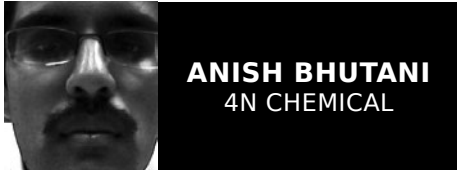
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Cardboard Boat Racing



ANISH BHUTANI
4N CHEMICAL

On November 5th, engineering students from different programs and years put their engineering ingenuity and planning skills to the test, in one of the less commonly known events on campus – the second ever Cardboard BOAT Racing.

The event started in the early evening in POETS, where teams of up to six people were given a pile of cardboard picked up from around campus, and a 50m roll of duct-tape, and had to build a boat that would float in the PAC pool and race across it. Each team had roughly 5 hours to build their boat, including a dinner break part way through.

There were a total of fourteen teams at the event, including one from executives, one from the outgoing FOC, one from the Math faculty, and many other class teams. Many teams even came up with costumes and themes for their boats for spirit points.

As a side event to the building of the boats, the EngSoc executives put THE CUP up, so

McMaster and UofT came down to see the start of the event. They had their own event, which I am sure is being discussed by exec. To announce the winner of the event, the TOOL made an appearance so that McMaster could see it before they took the Cup back to Hamilton.

Once the building phase of the competition was done, there was a judging based on appearance and how each team used their materials, and then everyone went to the PAC. Five heats were run, where each team had to do one lap in the shallow end of the pool. Hilarity ensued when many teams realized that as soon as their boat hit the water, it would begin sinking.

In third place was the team of Math students, who showed you don't have to be in engineering to make an impressive boat. Second place, and one of only two teams to make it from one end of the pool to the other was the 2016 Systems class. And the winners of the second ever Cardboard BOAT Racing competition was Possum Lodge, who based their costumes and their boat on the Red Green Show.

Look out for next term's Cardboard Boat Racing competition.



Top: Possum Lodge team rehearsing for the race, Bottom: Race competitors celebrate at the end of the competition.

Good News from the Student Success Office

BEN SELBY
ENGINEERING SENATOR

If you haven't already heard, the 2012 Fall calendar is going to be identical to the Fall 2011 calendar – meaning that there will be no shortened orientation and no Fall reading week in 2012. This was established during a meeting between some of the student senators, FedS President Matt Colphon, and SSO members Bud Walker, Pam Charbonneau, and Sean Van Koughnett. While the SSO did have a proposal being processed, they were concurrently seeking student feedback through faculty consultations, and due to numerous emerging concerns, the proposal has been scrapped. One of the major reasons cited for this was co-op scheduling conflicts (students could no longer work for the week of orientation). It seems though that through student feedback the SSO realized that their proposal was not well-prepared enough for successful implementation.

Why were the SSO considering an overhaul of the Fall schedule in the first place? One thing Pam Charbonneau mentioned several times was the plan to expand orientation to a full-year experience with events throughout first year, not just in the first week of school. It was stated numerous times throughout the meeting that first years are put through a whirlwind orientation week and then sent on their way without much more support or guidance. Another issue that was mentioned is that UW, unlike other schools such as Queen's or Western, has little identity with its students. Students tend to associate with their respective faculties (hello, engineering) but not with the whole school. The relationship between faculty and students is considered exceedingly poor – faculty seem to take little interest in student life and their experience at Waterloo. Bud Walker also mentioned that 1 in 4 or 5 students have a mental health challenge and that the school needs to be “more human” in dealing with students who struggle or fail. Bear in mind that some of these issues may affect other faculties differently than in engineering.

The really good news: the SSO seems genuinely dedicated to overhauling and improving the student experience at Waterloo, with special attention to the first year experience. They seem to recognize many of the issues that students at UW have complained about for ages. The caveat though is that while it is great to discuss all these things at a high level, there have been no specifics mentioned and nobody at the SSO seems prepared to provide any sort of concrete plan. This means that, as students, we have the opportunity and responsibility to provide our essential input,

otherwise we have no right to complain when things are changed – and eventually, things will change. The university wants to take progressive action towards greater retention and reputation, and this will likely involve scheduling changes.

The first step in developing and executing a vision is to develop our communication channels with the SSO so that students can be an ongoing part of the planning process advising them as to what sounds like it will work and what does not. There are many ways that this could happen. The most obvious one is holding more focus-groups with each faculty to discuss ideas and implementation. It is vital that these groups though reach a diverse population, not just say, EngSoc or Orientation-involved students but all students. Open town hall-style meetings are another choice. Other methods such as surveys are less preferable due to the lack of detail. In any case, it is clear that the SSO needs to do a much better job of consulting students before wasting time and money on preparing proposals that get shot down. At the same time, now that we have an opportunity to be a part of this process (as we should!) students need to seize it – if you want to see your and future students' experience at UW improved, this is your chance to speak up.

Send emails to the SSO (their emails are online and they will respond), get in contact with EngSoc, talk to me, do what ever you think to get involved.

At the time of this printing the student senators will have met again with the SSO including Vice President Academic and Provost Geoff McBoyle to discuss how the SSO will go about planning changes in the weeks, months,

and years to come. An update on that meeting will follow. In the meantime, let's discuss: Do you think that the SSO's reasons for wanting to change the Fall Calendar are valid? Does Waterloo need an overhaul or are things fine the way they are? What do you envision for a great first-year experience at Waterloo? Email me at senate@engmail.uwaterloo.ca and let's talk.



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Congratulations to all of our award winners!

We are happy to see you recognized at the awards dinner

SFF Debates

Fall 2010 – Ehsan Pasha, Civil,
Evelyn Russel, Environmental
Spring 2011 - Savannah Copeland,
Chemical,
Alexander Hogeveen Rutter, Electrical

Karen Mark Scholarship

Yuheng Helen Jiang

Dr. Hecker Exchange Scholarship

Simon Chen, Systems Design

Donald Clough Memorial Award

Keivan Bakhoda

SFF Exchange Scholarships

Anthony Lui, Civil
Wien Leung, Mechatronics
Wivorn Chowattanakul, Mechatronics
Paul Peng Yu Mou, Systems Design
Yuanfeng Elton Gao, Software
Adam Lawley, Mechanical
Manpreet Bansal, Mechanical
Brent Komer, Mechatronics

SFF Technical Speaker Competition

Fall 2010 – Erin Matheson, Chemical
Winter 2011 – Kim Osborne,
Mechatronics
Spring 2011 – Alexander Hogeveen
Rutter, Electrical

TA Excellence Awards

Samira Masoumi, Chemical
Chad Van der Woude, Civil
Yen Chieh Wu, Civil
Jon Eyolfson, Electrical & Computer
Al Hasanur Rahman,
Electrical & Computer
Brendan Crowley,
Electrical & Computer
Tiffany Matuk, Management Sciences
Mark Cremasco, Mechanical
Mathew Daley, Mechanical
Dylan McCully-Hayden, Mechatronics
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Rick's Rant: Teen Suicide



ZAC YOUNG
2A NANOTECHNOLOGY

On Friday, October 15, a tenth grade student from Kanata, Ontario, Jamie Hubley, took his life under the pressure of depression and bullying as a gay young adult. He is among 300 teen suicide deaths reported each year in Canada, which is the highest rate among the world's leading industrial powers. Jamie's blog posts showed him falling further into depression and out of hope that he could endure the remaining years in his high school. "I don't want to wait 3 more years," he wrote in his blog as his parting words, "This hurts too much. How do you even know it will get better? It's not."

In response to the well-publicized death, Rick Mercer, who is an openly gay comedian with a weekly show on CBC, dedicated one of his signature "rants" towards raising awareness about teen suicide. He calls on the accountability of both schools and public figures to take action on this issue.

Rick states that schools need to take a

stronger stance on instances like these. He recalls the "old-fashioned assembly" that got the police involved and found out who the culprits were. Rick points out that these students know that they were catalysts in Jamie's choice to take his life and so do others, so they should be held accountable for their actions. He makes a valid criticism of the tone that Canada's schools have developed on this issue. While not all schools can be typecast into having a passive approach towards homophobia, it is clear that such issues should be approached no different than any other hate crime. Creating a positive culture within the school community begins from the tone that school administration uses on issues such as the bullying that Jamie received. Over time, an observable trend within schools has appeared where discipline and justice have become something taken too lightly due to the challenge it places on administration to stand by their decisions. By creating serious consequences for such actions and allowing all students to collectively realize they can have an impact as large as a loss of life, perhaps gay teens will one day see a day where the voices calling out against homophobia in the school hallways reach a volume that drowns out the

insults and ignorant slander.

To this end, Rick also makes reference to a campaign started by gay American author Dan Savage, called "It Gets Better", which is aimed to encourage young adults that once they reach adulthood, the bullying and hate goes away. Rick Mercer has previously supported this message in one of his rants, however he has changed his message in this most recent statement. "It's no longer good enough to tell kids who are different that it's going to get better," Rick says, "We need to make it better now". He calls upon everyone, from teens to adults, to step up to the plate and reject homophobia. Rick places an emphasis on gay public figures to make themselves known. Teens need to be able to turn to those who are held in high public opinion and know that they are not alone and stymied by their sexual orientation. In addition, those who catalyze their depression must be made aware that their actions are immoral and homosexuality is an integral and accepted part of our society.

While Rick's statements were sparked by the death of a young member of the gay community, this message extends to all teen suicide and depression. Evaluate your actions

and those of your peers the next time someone says "that's gay", grumbles "that's retarded", or any other statement that has crept into daily vocabulary without regard for its larger impact. I know I am not alone in my self-evaluation that I have much to improve in these regards, so I challenge you to join me and make it better now. Reach out to someone in need, challenge ignorant comments and add your effort to reducing teen suicide and homophobia in Canada.



European Union Crisis Breakdown



ALISON LEE
2T NANOTECHNOLOGY

Although Canada has fared relatively well amidst recent financial crises, it has been hard to ignore the current crisis facing much of Europe. The world has been watching this past year as Greece, Ireland, Portugal, Spain, and others among the 17 euro nations struggle with growing national debts. If the Euro falls, then this could have powerful repercussions in the international market.

In a nutshell, the crisis is owed to the mounting national debt of many Euro nations. Particularly in the past five years, nations have spent far more money than they can earn and often surpassed the European Union's allowable debt limit of 60% of the GDP. Until recently, this didn't have a severe impact on Europe's economy, perhaps in the shadow of the US housing market disaster. However, international investors have begun to lose confidence in heavily indebted nations, which is causing interest rates to climb up a slippery slope. Intuitively, higher interest makes it harder for broke nations to borrow money because it puts them further in debt. This is why we've seen global credit ratings fall for nations like Greece and Italy.

To put the current situation in perspective, as of September 2011, the International Monetary Fund reported the EU's total public debt

to be 80%. However some nations far surpass this level. At 143%, the Big Fat Greek Debt is causing the most unease, with Italy not far behind at 119%. Meanwhile, many Eastern European and Scandinavian countries remain safely below the 60% limit, although they have much smaller economies.

Many Euro nations are now enforcing austerity measures such as cutting deals with banks to forgive some debt, raising taxes, government job cuts, or downsizing public services. This has led to massive public protests and changes in government; most notably the resignation of long-time Italian premier Silvio Berlusconi and the formation of a Greek coalition government. It has also been fuel for many "occupy"-style protests which demand fundamental changes to government to deliver democracy to everyone and which blame many national problems on corruption and inequality. One such series of protests were the 15M Madrid protests which I witnessed outside my window while on co-op, and the banners still hang on various buildings and small camps of protesters still "occupy" occasional street corners.

Whether it is public protests, domination of news stories and conversations, or a general air of frugality, the financial crisis is on the minds of all Europeans. There is no sense of impending doom as some newspapers would have you believe, but the unease is clear as the International Monetary Fund reluctantly doles out multi-billion dollar bailouts and non-euro investors lose confidence in what

they see as too risky an economy. Each Euro nation has its own particular reasons for its debt accumulation, but the most infamous has probably been Greece and Italy's tax evasion problems and embarrassing book-keeping slip-ups. The upper-middle classes tend not to declare much of their income and property, contributing to government debts, and hinting at other forms of corruption. For example in 2010, after Greece's 3.7% budget deficit for 2009 was revised to a whopping 12.7%, and then a few months later to 13.6%, the world took a more critical look at Europe's books and the governmental finger-pointing only got worse.

So why the massive bailouts instead of just making countries own up to their debts and lie in ruin? In order to understand why the European Commission is keen to prevent any nations- including Greece- from leaving the Euro, it is necessary to understand why the Euro was created in the first place. The idea behind a single currency in Europe was to enable internal trade and tourism, thus boosting the economies of all member nations. Initially 11 countries adopted the Euro in 1999, and gradually other countries came on board to total 17 members today. If one country exits the euro, i.e. Greece, then other indebted countries may follow suit, which could severely weaken the Euro's power because it just so happens that Europe's most indebted nations, such as Italy and Spain, also have some of its biggest economies. Thus, we will continue to see bailout after bailout and austerity measure

after austerity measure.

Aside from reading news articles about every single government vote on austerity measures, all we can really do is wait and speculate about how the crises will peak and play out. The current plan, hatched in late October by European leaders in Brussels, is a "three-pronged" attack. The first prong deals with Greece alone by forgiving 50% of its debt to private banks. This is on top of the 110 billion and 109 billion euro bailouts already received by Greece. The second prong is to boost the 500 billion Euro bailout fund to 1 trillion Euros allow contributions by international parties, enticing them with investment insurance. The final prong is to put more money into European banks somehow, either by private means or further budget reforms.

Will this three-pronged attack successfully slash Europe's debt, or will it fall flat like many a bailout package? The key nation to watch is Greece, which is an indication of how a nation teetering on the edge will fare internally and on the world stage. From a Canadian standpoint, there is not a lot to be worried about unless, of course, you do business with a European company threatened by the crises. My advice is to stay tuned, but don't buy into the all of sensationalism because we're not quite living in cardboard boxes over here in Europe. The amount of bureaucracy that contributed to the crisis is also at work to get rid of it, so political involvement mixed with a lot of patience is what a lot of people have been forced to have.

POETS

MOVIE SCHEDULE

SHOWINGS BEGIN AT NOON

Wednesday Nov. 16	Thursday Nov. 17	Friday Nov. 18	Monday Nov. 21	Tuesday Nov. 22
A Goofy Movie A Bug's Life Bee Movie Meet The Robinsons	X-Men Evolution	An Idiot Abroad	Mythbusters	Dumb and Dumber
Wednesday Nov. 23	Thursday Nov. 24	Friday Nov. 25	Monday Nov. 28	Tuesday Nov. 29
Malcolm in the Middle	Beverly Hills Cop Beverly Hills Cop 2 Beverly Hills Cop 3	Open Mic Pubcrawl	Check the POETS board for the updated schedule for today	Check the POETS board for the updated schedule for today

TEDxUW

Continued From Page 1

It was inspiring to see how such leaders developed their lives from a common denominator – the University of Waterloo.

A refreshing performance by the Waterboys kicked off the event followed by the opening remarks presented by Ron Tite, the extremely entertaining host of the event.

The speakers, ranging from an Emmy Award winner, successful entrepreneur, industry leader, community builder, experimental physicist, and many more, all delivered their passion to the attendees. The most notable aspect of the TEDxUW presentations was the ease in which speakers delivered their presentations; it was easy to see that when one is passionate about an idea or a cause, he or she is able to smoothly present it in an interesting, convincing, and inspiring manner. Most speakers used a personal life experience to leverage their point and inspire the attendees to become “Catalysts for Change”, find their “X Factor”, or to “Take Action.” The speakers were comical, emotional, sincere; within an 18 minute presentation, each speaker managed to connect with the audience members and engulf them with an inspiring lesson or experience.

The breaks between each few sessions provided the attendees with the opportunity to mingle, connect, and share ideas. Booths from some of the event sponsors, live music, and a photo area kept the atmosphere light; impeccable planning of such breaks provided attendees with the maximum potential to enjoy their time socializing while also maintaining the TEDxUW goal of sharing ideas and passions.

A remarkable presentation by Larry Smith, an inspiring University of Waterloo economics professor, regarding finding your passion

in life and overcoming any obstacles finalized the speakers for the day. The event ended with closing remarks by Ron Tite, a delightful performance by the Unaccompanied Minors, and a very warm closing statement by the event organizers.

The TEDxUW organizers went the extra mile and invited all the participants to an after party at the Bomber; a final opportunity to connect with other people who attended the event that share a similar passion for change.

This event was certainly one of the highlights of this term; an event that will ideally be a recurring feature of the University of Waterloo. TEDxUW presented inspiring leaders and passionate delegates with a forum to share their experiences, passions, and to spark change in the world. I highly suggest that you go to www.tedxuw.com for more information and links to the videos from the event.

In closing, it was really interesting to see how TEDxUW represented the University of Waterloo's culture and spirit. The speaker's stories and inspiration related to all attendees and managed to inspire and move us all individually. I highly suggest that, given the opportunity, one must attend a TED event; even better, it would be amazing to see more students rising up and choosing to plan such events here at the university and strive to be part of this legacy.

The most important ideas I learned at TEDxUW were: think about what drives your passion, make a decision or a plan, commit to realistic goals, and battle the obstacles. As an Engineering student, a word that really inspired me, presented by one of the speakers, Safwan Choudhury, was “Imagineering: Letting your imagination soar, and then engineering it down to earth.”

Convictions Made in Campus Court Plaza Fire



For those in 2A or lower, you have never experienced a quaint diner named Mel's. You have never experienced the feeling of waking up hungover after a Pubcrawl, meeting up with your friends to discuss the previous night's embarrassments, and gorging on the cheap, but delicious Mel's special.

That's because in the early morning of what would be a beautiful sunny spring day, a fire broke out in the campus court shops on the North-east corner of University Avenue West and Philip St. The fire started at a nightclub and quickly spread to the neighbouring businesses - an optometry clinic, a sushi restaurant, a candy store, and lastly, the beloved Mel's.

Word that Mel's had burned down spread as quickly as the fire that consumed it's iconic 50's interior. People were in disbelief, shock, and likely denial. For the immediate days after the fire, people came by to observe the damage, each of them engraving the image of the Mel's sign tilting on the verge of collapse from a charred wooden frame into their memory.

The fire was immediately listed as suspicious and promptly investigated by the Ontario Fire Marshall. Arrests were made in connection with the fire, one of them being a uptown Waterloo nightclub owner whose establishment is regularly frequented by Waterloo pubcrawls.

Less than 2 years since the Waterloo community lost Mel's, the first criminal convictions

were announced last week in connection with the fire of April 2010. According to the Waterloo Record, Daniel Campbell and William Schneider have been convicted of arson and sentence to jail time for starting the fire which caused \$4.5 million in damage.

In what seems like a plot from an organized crime movie, Campbell apparently had racked up \$19,000 of drug-use debt from the owner of the Titanium nightclub in uptown Waterloo. In order to clear the substantial debt, Campbell was hired to burn down Tabu nightclub to remove some nightclub competition from the City of Waterloo. Although Campbell only meant to target Tabu, several other people's business were destroyed due to the fire.

Campus Court will eventually be rebuilt, but there is presently no solid timeline known as to when it will happen. Jerry Smith, the owner of Mel's has always vowed to rebuild the Waterloo favourite since the day the fire consumed his business.

Although we're currently still Mel-less for the time being, there is still hope that one day, students alike can once again enjoy a hearty, cheap breakfast while not travelling too far from campus.



The Record

Waterloo Engineering Competition

Continued From Page 1

The next morning, 8 teams remained and presented their solutions to a panel of two judges who were experienced in not only transportation, but also the University's parking situation.

Congratulations to this term's winners for Junior Team Design - Rahul Patel, Tarjote Chaggar, Matthew Vandenberg and William Cullen. Senior Team Design - Nevin McCallum, Cody Prodaniuk, Jeff McClure and Maple Leung. Lastly, consulting Engineering - Tim Bandura, Adriana Cameron, Trevor Jenkins, and Marc Tan.

The Waterloo Engineering Competition was founded in 2009 as the University of Waterloo qualifier for the Ontario Engineering Competition. The competition is proudly organized and sponsored by the University of Waterloo Engineering Society as well as the Sanford Fleming Foundation. WEC is held twice per year to choose two teams per category to represent the University at the provincial level. OEC is held every February and is hosted by a different university each year. OEC 2012 is being held at the University of Toronto and was last held at the University of Waterloo in 2010. Successful teams

at OEC proceed to the national level Canadian Engineering Competition that is being hosted by the University of British Columbia in Vancouver in March of 2012. Waterloo is no stranger to being successful at these competitions with the Junior Design team taking home the 1st place prize at CEC last year in Montreal.

The next Waterloo Engineering Competition will be held in Spring 2012 to begin choosing teams for the 2013 OEC to be held in February of 2013 at a to-be-determined Ontario Engineering University. If you missed out on this term's competition - be

sure to keep your eyes out for advertisements that will likely be popping up early Spring 2012.

Project submissions for sending Waterloo student project teams to the Innovative Design competition are now being accepted. Waterloo will be sending 2 teams - one for each stream. Check out the article in this issue of The Iron Warrior titled “Calling all Undergraduate Engineering Design Project Teams” for more detailed information. This is an excellent opportunity to represent the University of Waterloo as well as win cash prizes to help fund your project.

Conflict in Ontario - The Future of Our Profession

CHARLSIE SEARLE
GUEST WRITER - MCMASTER GRAD

The profession of engineering is self-regulated and represented by two professional organizations: the Professional Engineers Association of Ontario (PEO) and the Ontario Society of Professional Engineers (OSPE). PEO's role is to act as the regulator of the profession; it oversees licensing and ensures the profession is working to serve and protect the public. It is given this power through the Professional Engineers Act, a piece of provincial legislation. OSPE's role is to act as the 'voice' for the profession; it advocates for engineers' professional and economic interests, as well as provides members with a variety of services and professional development opportunities. PEO has recently initiated a referendum within its membership to terminate the legal agreement it has with OSPE. This has made the PEO-OSPE relationship a hot topic in the engineering community.

PEO has been in existence since 1922 when government passed the first Professional Engineers Act. Throughout the

1990s, the idea of a separate advocacy body for engineers was debated, and in 2000 a legal agreement between PEO and OSPE was signed, marking the official creation of OSPE. The agreement outlines, among other things, the different roles of PEO and OSPE, any funding that PEO provides OSPE, a non-competition clause stating that the two organizations will not provide duplicate services, a method for settling disputes and how to terminate the agreement. An addendum was added to the agreement in 2004 providing clarity to some clauses of the original agreement.

Between 2006 and 2009, PEO introduced new programs such as the Government Liaison Program, the Mentorship Program and the Ontario Centre for Engineering and Public Policy. Some believe that these programs are in direct competition with OSPE's programs, specifically when it comes to the role of advocacy, and that these programs should be terminated by PEO. Others believe that the PEO's programs are working to serve and protect the public interest, and not to advocate, making them fall within PEO's domain. There are also people who believe that

the programs fall within OSPE's domain, but that OSPE lacks the financial means to support them (PEO has mandatory membership with an annual budget of approximately \$21.6M, while OSPE membership is voluntary and has an annual budget of approximately \$3.2M).

PEO and OSPE have spent many years trying to settle their differences through a Joint Relations Committee, the dispute resolution mechanism outlined in the agreement. In 2009 an accord between the two organizations was signed, but it holds no weight legally.

In June 2011, OSPE called for the transfer of some of PEO's programs to OSPE, but no such action has happened. In September 2011, OSPE initiated the final dispute resolution mechanism, mediation, in which a mediator assists the two parties in resolving the dispute. If mediation is not successful in resolving the dispute, it will then go to arbitration in which an arbitrator will resolve the dispute. In this case, the arbitrator will decide which aspects of the profession are the responsibility of PEO and which are the responsibility of OSPE.

The only way for the original PEO-

OSPE agreement to be terminated is by a majority vote of PEO members. This is what PEO is currently pursuing through a referendum. It is PEO's viewpoint that the agreement has become outdated and is now a barrier to a successful relationship between PEO and OSPE. PEO had hoped that the guiding principles of the 2009 accord would be followed moving forward, superseding the agreement, but OSPE doesn't believe that this accord resolved the dispute and has initiated mediation. Termination of the agreement avoids mediation, and possibly arbitration, in which a third party arbitrator would decide the future role of both organizations. Some may view arbitration as being inappropriate for a self-regulating profession, and/or not necessarily in the best interest of a profession who's mandate is to serve and protect the public interest. PEO is holding a series of town hall meetings to discuss the PEO-OSPE relationship.

To view the entire blog entry, town hall meeting dates and locations, as well as links to the documents referenced in the article, visit <http://engsoc.uwaterloo.ca/node/6064>.

Unsung Heroes: Aquaman, King of the Sea



DANIEL OSORIO
2A NANOTECHNOLOGY

So there is always a lot of guff that goes towards a lot of superheroes that are deemed useless, weak, and have their existence questioned because they seem so ridiculous. The most famous of these heroes is Arthur Curry, who is also known as Aquaman, King of the Sea.

Some common misconceptions of Aquaman are that he can only talk to fish, he's useless outside of the water, and he's one of the weakest and dumbest superheroes ever created. But what you think about this guy is false; Aquaman is badass, and a certified member of the Justice League.



Aquaman, art by Brian Denham

Have you ever thought of how much of the Earth is covered by water? Well if you're wondering it's approximately 70%, most of which is part of the four large oceans. These waters house cities like Atlantis, which are like cities on the surface world only with more advanced technology. So just like any other city there comes crime and super villains, like the Black Manta and Ocean Master, who cause havoc across this vast majority of space. There is only one hero that watches over this vast area and that's Aquaman. Has anyone ever wondered why there is never any trouble coming out of the water? Well it's not because there is no danger, it's because Aquaman stops the threat before it gets too big. There are thousands of superheroes on the surface world constantly destroying cities and endangering civilians to catch the villains, and sometimes they're never able to handle the more powerful and evil villains. When this happens, they usually call in Aquaman to assist in the pursuit. Also, Aquaman doesn't just hang out in water all the time. Aquaman has travelled through space and time, fighting off demons and monsters from other planets. Aquaman does three times the work that thousands of heroes can't do, and he does it better.

Anyone who thinks Aquaman is one of the weaker heroes out there is wrong; the truth is he is actually one of the most powerful. He doesn't simply talk to fish, but actually has telepathic abilities. Aquaman is able to telepathically nudge an aquatic animal, or any other conscious being, to perform a task. He once gave a seizure to an enemy just by concentrating. Now, he may not be the quickest on land, but he can move up to 1,150 mph swimming and he can move 60 feet in the air from water. He is also imper-

vious to bullets and most projectiles. He has super strength that has been known to rival better-known heroes like Wonder Woman. He has improved senses and has natural night-vision, plus he has been known to have precognitive flashes depicting the future. On top of all those powers, he has been trained in deadly martial arts, weapons, and fighting deadly animals, and he started his training when he was eight. Aquaman has also been known to kill villains that are truly evil. If we had more heroes like Aquaman, maybe villains like Joker and Lex Luthor wouldn't be killing everyone all the time.

Aquaman as a character is also one of the most in-depth and interesting to date. Aquaman's stories, unlike most heroes, don't always end with a happy conclusion. When Aquaman's son got kidnapped, Aquaman failed to save him in time and watched his son be suffocated to death by Black Manta, which led him and his wife to divorce. A couple of months after his son's death, one of his enemies, Charybdis, took away his power of telepathy temporarily and shoved his hand in a tank of piranhas that tore off his hand. When Aquaman fought and defeated Charybdis, with one hand, Aquaman shoved Charybdis' head into the Piranha tank. Aquaman then replaced his hand with a harpoon hook, and after some time with enchanted water, which basically acts like the Green Lantern's ring only with water instead of green light. Aquaman also rules the sea, with an army bigger than China's. He could very easily take over the Earth but instead he uses this army to assist the people of Earth when they need it most. If you ever think of the Justice League, you think of Superman and Batman. Aquaman originally founded the group with them, so the world's greatest superhero team wouldn't exist without this guy.

Aquaman has also tangled with some of the fiercest villains known to man. He has fought gods, demons, aliens and he even punched Death in the face when Death told Aquaman it was his time. He's been claimed so powerful that gods like Poseidon have bowed to him and gave him magical weaponry. So next time you want to make fun of Arthur "Aquaman" Curry, think again, because there's no hero that even begins to be on this man's level. What other superhero has been known to throw bears at his enemies?

Competitors Wanted Calling all Undergraduate Engineering Design Project Teams

ANGELO ALAIMO
WEC COMMISSIONER

At some point in their engineering education career at Waterloo, students will be engaged in an engineering design project as part of their curriculum. In this design project, some teams will develop a working proof-of-concept which demonstrates their idea. Some students create design projects that are so marketable and innovative that they actually do make it from proof-of-concept to a real product.

Little do these teams know that engineering competitions exist at the provincial and national level where design project teams can compete with their engineering design projects against other engineering schools to vie for cash prizes and other awards.

It's called the Innovated Design Category that is part of the Ontario Engineering Competition (OEC) which is being held from February 3-5 at the University of Toronto. According to OEC's website, "Competitors must design a marketable product or service, or a component of a service that is a significant improvement upon previous designs."

Teams of 4 set up a "trade show style" booth and present their design to judges at the competition. The team's goal is to, "show

the technical and economic feasibility and demonstrate the design to the judges and the general public." Based on their design, booth, and oral presentation, judges will determine which teams are the top 3 in the competition to win the large cash prizes which total \$7500. First and second place teams at OEC will receive \$3500 and \$2500 respectively and will also travel to Vancouver in March for the Canadian Engineering Competition (CEC) being held at the University of British Columbia.

The University of Waterloo will be choosing two teams to send to this February's OEC, so you may be wondering how your design team could secure one of those spots. Interested teams are required to submit a brief (5-6 slide) PowerPoint presentation proposal to Steve Lambert at steve@uwaterloo.ca before Friday, December 16th. This proposal should introduce your team, and include motivation (general problem), a summary of your design approach, verification of feasibility of solution, and the key features of your proposed exhibit. The presentation should emphasize the innovation, benefits to society, and economic viability. To help you understand more about the competition, brush up on the official competition rules at <http://oec-cio.ca/node/3>.

prof Quotes

"I think the military did a study on sleep deprivation. Physically they were fine but mentally...they shouldn't be allowed near machine guns"
Ward, ECE 254

You hate dimensional analysis? That's like hating kittens!
Peterson, ME 362

"A taurus is a doughnut and a doughnut is a tea cup to mathematicians."
Sivaloganathan, MATH 212

"If Sean Parker (founder of napster) could program at 8, why can't you program at 18?"
Seviora, ECE 150

"You are looking at that 5kOhm resistor and you are thinking, that's really big, there are five thousand little ohms running around in there"
Nairn, ECE 242

We're not in the real world, so we'll have to do this right."
West, CIVE 313

Disclaimer:

profQuotes have not been confirmed by The Iron Warrior Staff and are meant for entertainment only.

Send in your profQuotes to: iwarrior@gmail.com

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Greetings and Salutations from EngFOC 2012

Hello beautiful people!

We are Brock Kopp, Liz Celentano, Anjali Gopal and Graeme Scott and we are very thrilled to be your EngFOC 2012 team. Words literally cannot describe how excited we are, so hopefully this onomatopoeia can: RAAAWWBOOMKAPOWWEEEEEEEE-BANG!

We will be working very hard over the next 10 months to make sure that Orientation Week 2012 is going to be amaaaazing for the incoming class of 2017.

Before we go any further, let us ask you a few questions:

Did you love YOUR orientation week? (We're lookin' at you, class of 2016!)

Did you HATE your orientation week and have ideas to make it better?

Did you participate as a leader before, and want to do it again?

If you answered "yes!" to any of those questions, then we want you! Putting on a great Orientation Week is something that we can't do alone, so we're asking for your (yes, your) help. We're looking for both new and returning leaders to fill the roles of Big, Huge,

EDCOM, and Media Guru.

Applications for B-Soc leaders will be out before the end of this week, so keep your heads up! Any leaders applying for the role of Huge, EDCOM, or Media Guru will have to do an interview on the weekend of December 3rd/4th, a sign up sheet will be posted outside the Orifice door. For any students on co-op for both fall and winter terms, we will be conducting Skype interviews in the Winter

term if you are unable to make it to Waterloo. Applications will be closing November 30th at 11:55pm.

We will be sending out the link via electronic mail (or email for those well versed in computer speak) very soon. For more information on the various leadership positions and opportunities, available to you feel free to take a look at our website: <http://www.eng.uwaterloo.ca/~foc> and if you have any other

questions for us feel free to email us at eng-foc2012@gmail.com and we will get back to you ASAP.

We look forward to getting the chance to work with all of you to make Orientation Week 2012 a superfantasticamazingtime. Being a leader is a great way to get involved, meet new people, and have mad fun, so we hope you will apply!

Hip hip hooray! EngFOC 2012



Anjali Gopal



Brock Kopp



Graeme Scott



Liz Celentano

So You Don't Have a Co-op Job...



ANGELO ALAIMO
4N ELECTRICAL

It's that time of the term again - we're halfway through the continuous round on JobMine and for some people, time is running out to get a job. As someone who has been jobless at this point multiple times in my co-op career, I leave some tips below on how to move forward.

How's Your Resume Holding Up?

If you're the type of person who just isn't getting interviews, it's likely your resume needs to be looked at by someone other than yourself. Sometimes it's hard to recognize the obvious mistakes ourselves and a fresh pair of eyes over your resume can find glaring errors. The Engineering Society has run resume critiques at the beginning of the term and right before continuous round started. Since these sessions are complete, consider going to fellow classmates or even better, upper years for help, especially if they're the people who were getting all the interviews early on in the co-op process. Yes, it might be embarrassing to have to ask someone for help, but being embarrassed for ten minutes may be better than not having a job.

Apart from the Engineering Society, counselling services and CECS also have resume critiques. You're already paying for their help through your student fees, so you might as well take advantage and have them look at your resume. They have seen

hundreds (if not thousands) or resumes, and know the very common mistakes than everyone makes. Their critique sessions are also confidential, so if discreteness is your thing - no one else has to know.

Cover letters - why aren't you using them yet? I'm a huge advocate for cover letters, as they separate you from everyone else not writing cover letters and they allow you to sell your skills to an employer. An employer can receive dozens of resumes for a job and it's quite easy to sort those who have taken the time to write cover letters and those who have not. Writing cover letters shows you're not lazy and are more enthusiastic towards the job than others. The hardest part about writing a cover letter is writing the first one. Once it's written, you can modify it to fit the job you're applying too, but DO NOT use a generic cover letter for each job. Tailor each one to each job you apply to and focus on showing that your skills match up with the job's description. If the above is not enough motivation to begin writing cover letters - I received 10 more interviews in a term where I wrote cover letters for each job compared to a term where I wrote none. It's worth it.

If you have a pretty kickass resume, you're writing cover letters, and you're getting the interviews, but still not getting jobs, you may want to consider interview workshops. CECS holds interview skills workshops to help students sell their skills to employers. CECS has tons of tips to keep in mind when going to interviews and even has listed these online in their

career development e-manual. Why not also consider having a friend give you a mock interview?

Don't Give Up

As you get into the phase of the term where all the projects and big assignments are due, and you are realizing that you don't know anything in your courses, it is easy to give up on looking for jobs for the term, and focus on school. While school (and passing) is very important, it should not stop you from potentially getting a job. Make it part of your study/break routine to check JobMine and apply. Many students will give up at this point and focus on school, which means there will be less competition to the jobs you do apply to.

Consider Volunteering

I'll admit it. Not having an income sucks, especially when all your friends are getting paid. Although it's nice to get paid, it's the sad fact of co-op that you may need to volunteer for a professor in order to get credit for the winter term.

If you currently don't have a job, you should probably start looking for professors. The reason I suggest starting earlier is so that you can find the right professor to volunteer with. This includes what kind of research the professor is working on, and what projects they have running. Finding a project that aligns with your interests can be a more rewarding experience than trying to find a random project last minute just to get that sweet co-op credit.

Most professors also realize that no student wants to volunteer, and tend to agree

to let you volunteer under them while you continue the job search. I have even heard of some professors that encourage students to continue to look for a job while working for them. Do not see volunteering as a way of "giving up" on JobMine, however, see it as a contingency in case you don't get a job a month into the term. Remember - if you fail to plan, you plan to fail.

Another benefit to trying to find a professor early is that it gives the professor time to look for possible funding. I have had many peers who have talked to a professor about volunteering, and then two weeks later receive an email from their professor stating enough funding had been approved to pay minimum wage (better than nothing). While this doesn't always happen, if you look for a job at the last moment, you almost certainly won't be getting compensation.

Another great thing about working for professors is getting research experience. Although the work term may not have been exactly what you wanted, the experience is great for your resume - especially if planning on grad school after completing your undergraduate degree.

In all, many people have been in your situation before and it will all work out in the end if you keep a positive attitude. Keep persevering, and never ever let yourself think you can't secure a job. Although, it will work out in the end, you can't sit on your laurels and just expect to get a job - you need to work for it. Good luck!

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EngSoc Commissioners Restructuring

ALESSIA DANELON
PRESIDENT

If at first you succeed, try, try again!

Commissioners were awesome. Trying out these new positions meant that we, as executives, were able to pursue more projects, at a faster rate, and still provide guidance and support for our directors. Sure, there were ups and downs. The Executive Structure Review Committee Report (ESRC Report), available under "Documents" at engsoc.uwaterloo.ca, outlines that there was a lack of clarity surrounding what the specific responsibilities of commissioners were supposed to be and who they were supposed to report to when initiatives crossed portfolios. Overall however, the benefits of commissioners far outweighed the difficulties, and most of the set-backs were a result of very broad job descriptions, and if those were to be clarified would provide an even greater benefit to the student body through their work.

So that's exactly what we are doing. The executives have decided to keep the following Commissioner roles to conduct a secondary trial run in the Spring 2011 term.

- Student Life Commissioner
- Student Services Commissioner
- Communications Commissioner
- WEC Commissioner
- Speaker
- What's the motivation for this decision?

Combined with the recommendations from the ESRC Report, Commissioners are those volunteers in EngSoc who differ from Directors in that they have an ongoing task that is conducive to the smooth functioning of the Engineering Society. These roles differ from executives in that the tasks are those that have inconsistently been compromised in the past because the

executive portfolios were too extensive. The presence of commissioners essentially means:

- Better and more prevalent guidance for directors
- Clear and concise procedures to follow for advertising, bookings, and general logistics surrounding events and services
- Consistent and broad audience advertising of services, events, and external opportunities
- An ever expanding and increasingly well run Waterloo Engineering Competition
- Well run and productive EngSoc meetings
Where do you come in?

We need commissioners. Plain and simple. If you think you have the skills to contribute to any of the overarching goals listed above, then try it out. Commissioner descriptions are available on the EngSoc website at engsoc.uwaterloo.ca/commissioners. Details about commissioner responsibilities and reporting are listed, as well as the link to apply. Watch the EngSoc website for information on Commissioner and Director application due dates.

Moving Forward

After the Spring 2011 Term, the B-Soc and A-Soc executives will have to discuss moving forward with commissioners, and perhaps exchanging of specific tasks within executive portfolios. Though all the trial runs don't currently conflict with Policy or Constitution of the Engineering Society, if their benefit is seen to be a scalable and promising in the future, then both societies will need to agree on permanent implementation. The details of this cannot be confirmed as of yet, but they will likely include Policy Manual changes, and the creation of resource documentation for those coming into an executive, director, and potentially commissioner role in the future.

November Updates

ALEXANDRA COLLINS
VP FINANCE

The term is quickly coming to an end but that doesn't mean the fun is over yet. Before you all get gloomy and worried about exams, here are three key things that will bring you joy, fun, and convenience.

1. There are so many great events still to come. In these last few weeks you can look forward to some big and awesome events like:

- Semi Formal
- Rock Climbing
- Jazz Band Show
- Santa Claus Parade
- TalEng
- EngPlay

• EOT

Check out engsoc.uwaterloo.ca or join the mailing list for more details.

2. Directorship Applications will be opening soon.

Have you enjoyed the many events and services this term? Would you like to run them in the summer term? Stay tuned for more information about Directorship applications and start asking current directors about their experiences to learn more.

3. Complete all your holiday shopping at Novelties.

Dads, Moms, sisters, brothers, Aunts, Uncles, Grandmas, and Grandpas all love you and Engineering. So how about you stop by Novelties to complete all your holiday shopping in one place.

Those Course Critiques

OWEN COUTTS
VP EDUCATION

I understand that course critiques can be tedious and feel like a waste of time. However, course critiques have a large impact on how the University evaluates their professors in terms of teaching quality. Professors pay is impacted by their teaching evaluation. As a student course critiques are your best opportunity to make your voice heard about your professors and what you think of them.

There are two parts to course critiques, the comments section and the numerical section (the Scantron part). The numerical information is the part that everyone sees. This information is aggregated and reported to department chairs and becomes part of the overall evaluation. The comments section is between you and the professor. Professors don't always share it with others. Be nice but honest, try to help them identify weaknesses or areas of

strength that they could improve on. Every evaluation is read to make sure that there is nothing that could be taken as offensive or rude. If your evaluation is deemed to be inappropriate it will be thrown out so make sure you make your points without being rude.

Lastly, try to find out when your course evaluation will be. If you ask your prof they will be likely to let you know when they want it to happen. Let the rest of your class know. Often times, especially with a bad professor, very few students will be in class for the evaluation. If only 20 evaluations are recorded in a class of 100 there are very few actionable results because of such a low participation rate.

If you have more questions about course critiques don't hesitate to ask me. If you would like to help out with the process watch the EngSoc events calendar for the course critique reading party.

Policy Manual and Constitution Review

ANDREW FISHER
VP INTERNAL

After many meetings, the review committee has further defined an outline for how the Constitution and Policy Manual will be structured. The structure will resemble something similar to what Queen's uses now for their overarching Society documents. The constitution is to be composed of five Articles and six By-Laws. Below is the breakdown of these sections.

Articles

- Name
- Objectives (High level "we do these things")
- Structure (High level "we have these positions")
- By-Laws
- Amending the Constitution

By-Laws

- The Engineering Society Council (council meetings, Robert's rules, class reps, Joint Council, etc)
- Elected Executive Officers (positions, qualifications, overarching duties, etc.)
- Appointed Officers and Directors (roles, qualifications, terms, CRO, Speaker, etc.)
- Elections and Referenda (who can vote, how elections are run, etc.)
- Finances (the value of the fee, the budget, etc.)
- Policy Manual

Articles will contain the high-level definitions of the society while By-laws are to contain more detailed information which supplements the articles. Amending articles will follow the same process as before, where each society must have 2 readings and 1 vote

with 2/3 of the vote in favour. A proposed addition is that if 1/3 of the vote abstain, then the motion is tabled for further review. By-Laws will be amending with 1 reading and 1 vote on each society OR a vote a joint council. The ratio of votes will follow the same process as the constitution.

The structure of the policy manual will remain roughly the same with the addition of the Interim Policies and the Forms sections. This document will define the daily operations of the society. The policy manual is considered a living document and therefore will be structured to allow for frequent change. It will use the same amending process as stated in the current document. The breakdown is proposed as follows:

Policy Manual

- Terms of Reference
- Finances (budget, ECIF, donations, etc.)
- Communications (Advertising, mailing list, social media, etc.)
- Services (POETS, C&D, Novelties, etc.)
- Relationships (IW, WEEF, EWB, etc.)
- Operations (conference policy, directorship policy, etc.)
- Interim Policies
- Forms (budget request, expense, P**5 prize claim, etc.)

Now that the structures of the Constitution and Policy Manual have been defined, the committee has begun to move, re-write and add to the sections in the current documents. All changes will be made available for viewing by the 2nd meeting in the Winter Term. Should you have any questions or feedback please feel free to contact me and I will relay your ideas or concerns to the committee.

EngSoc Executive Contact Info:

EngSoc B Executive
Alessia Danelon - President
Andrew Fisher - VP Internal
Yasser Al-Khder - VP External
Alexandra Collins - VP Finance
Owen Coutts - VP Education

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EngSoc Information

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EngSoc B Executive



Left to Right - Alessia Danelon, Alexandra Collins, Owen Coutts, Andrew Fisher, Yasser Al-Khder

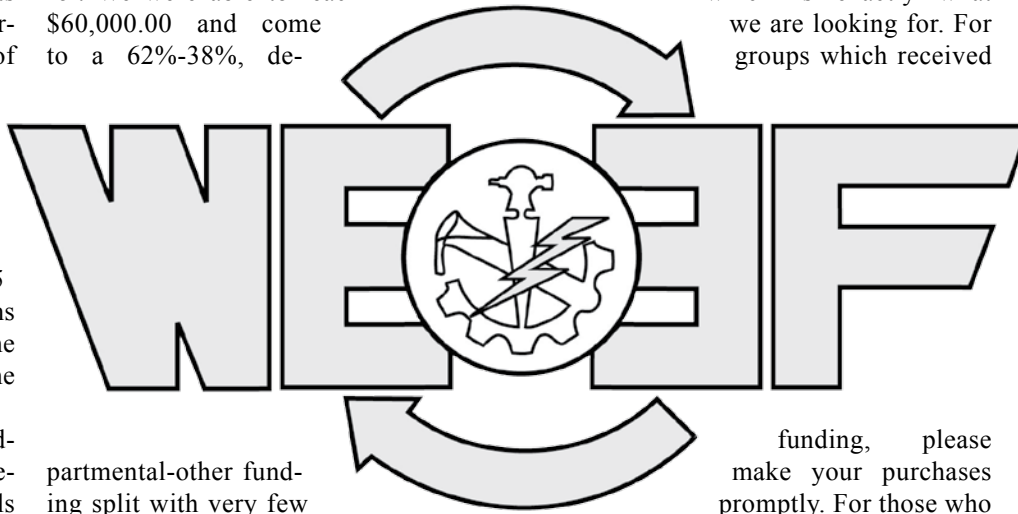
WEEF Funding Results

LAURIN BENSON
WEEF DIRECTOR

Hello UW Engineering! The results are in! This term WEEF received thirty-four proposals, requesting a total of \$200,196.61, with only \$60,000.00 to allocate. There were requests ranging from computer upgrades, to programmable robots, to continuous-stirred tank reactors, to differentials (I was told that "cars need them"). The proposal turn-out comprised of 15 from departments, 14 from student teams and 5 in the miscellaneous category. The final allocation results can be seen in the accompanying table.

Early in November our fantastic Funding Council, comprising of class representatives, met to review the proposals and determine where WEEF's financial support would be felt the greatest. This

table is a product of their critical thinking, penny-pinching and no-nonsense attitudes, which I greatly thank them for. We were able to reach \$60,000.00 and come to a 62%-38%, de-



partmental-other funding split with very few tears. THANK YOU!

Also, thank you to everyone

who submitted a proposal. All of your initiatives are aiming at improving UW Engineering at home and abroad, which is exactly what we are looking for. For groups which received

funding, please make your purchases promptly. For those who did not, please continue to refine your proposals and reflect

on the questions that were asked of you during presentations.

Looking ahead, the WEEF Board of Directors meeting will be happening on November 22, to finalize the funding decisions and review the term as a whole.

Also, WEEF's \$10,000,000.00 Party will be happening on Thursday, November 17 from 11:30 am to 1:30 pm in the CPH Foyer. Please come out to celebrate this amazing accomplishment with us and get some tasty WEEF cake!

Finally, look out for another WEEF article in the next IW issue, where we will examine Fall 2011 Participation Rates!

If you would like more information, please consult your class WEEF representative, the WEEF website at weef.uwaterloo.ca or the WEEF Director at weef@uwaterloo.ca.

What Happened, What Happened, and What's Coming Up

YASSER AL-KHDER
VP EXTERNAL

No you didn't read that wrong. These are two different "What Happened"s. The first one refers to events that happened before writing this report, and the second one is what happened by the time you're reading this. So let's begin.

What happened:

Shadow Day: Shadow Day went great. We had around 90 high school students visiting our campus to get a taste of Engineering by attending 1st and 2nd year classes and sitting in sessions that detailed the application process and the co-op system. I would like to thank the Shadow Day directors, Matt and Christina, for their awesome work. You guys rock!

WEC: The Waterloo Engineering Competition (WEC) was a great success. We had around 40 teams competing, including 20 junior design teams. The winners will compete in the Ontario Engineering Competition in U of T in February 2012. Check out the WEC article for more info. I also want thank Angelo, the WEC commissioner, for doing such a great job organizing and running the competition. Thanks Stressball!

What happened:

PEOSC: The Professional Engineers Ontario Student Conference (PEO-SC) was run last weekend in Ottawa. In fact, I wrote this report in Ottawa. The conference brought Engineering students from all across Ontario to

discuss and learn about current engineering issues and topics. The conference typically features speakers who work in some engineering industry, academics, or entrepreneurship. I can't say much more about the conference right now. A report will be released soon after the conference detailing the event.

DOT Conference: The Design Our Tomorrow (DOT) conference is a TED Talk style conference that is aimed towards a younger audience, mainly undergraduate and graduate students. Speakers included a Nobel Peace Prize winner and the first product manager of Foursquare. The conference organizers were kind enough to give us 50 free tickets to the conference. I want to thank Nan and Harry for handling the logistics of the conference, and making my life easier.

What's coming up:

NCWIE: NCWIE stands for the National Conference on Women in Engineering. It is a conference that is targeted to discussing and learning about issues and topics that are related to female Engineering Students. The conference is being held on the weekend of the 19th at McMaster University.

U of T Graffiti Party: The University of Toronto Engineering Society are holding their second annual graffiti party at SUDS, the U of T EngSoc bar/lounge. There will be a dj, black lights, and a lot of paint. The event is happening Friday the 25th and the tickets are \$10 each. We are looking into providing transportation, but it's not guaranteed yet.

Well that's all I have, for now.

Funding Awards

#	Proposal	Requested	Awarded
Architecture			
1	Air Cleaners for Architecture Workshop	\$1,300.00	\$1,300.00
2	Computers for Video Editing Room	\$10,000.00	\$2,500.00
3	CNC Suction System for Architecture Workshop	\$4,000.00	\$4,000.00
Chemical Engineering			
4	Continuous Stirred Tank Reactors in Series	\$6,633.09	\$4,823.09
Civil and Environmental Engineering			
5	Agilent Openlab CDs Software Upgrade	\$4,914.00	\$3,684.00
6	Replacement of Undergrad Laboratory Testing Equipment	\$7,320.00	\$5,490.00
Electrical and Computer Engineering			
7	Mobile Robotic Arm and Base for Me547 and Mte460	\$18,108.25	\$5,500.00
8	E&CE Linux Monitor Upgrade	\$1,000.00	\$-
9	E&CE Laboratory Monitor Upgrade	\$2,050.00	\$656.81
10	E&CE Lab Computer Upgrades	\$4,360.00	\$-
Mechanical and Mechatronics Engineering			
11	E5 Live Video Conferencing / Streaming Project3	\$30,000.00	\$-
12	Uv-Ozone Cleaner For Mte 545 - Introduction To Mems Fabrication	\$4,046.00	\$2,428.00
13	3d Printer For Me/Mte First Year Programs	\$6,500.00	\$3,250.00
14	Fuel Cell & Arduino Project For 1a Mechatronics	\$4,000.00	\$2,000.00
Software Engineering			
15	Programmable Robots For SE Concepts Course	\$1,776.00	\$1,776.00
Departments Total		\$106,007.34	\$37,407.90

#	Proposal	Requested	Awarded
Engineering Student Teams			
16	ASIC Team	\$860.00	\$-
17	Concrete Toboggan Team B	\$2,165.00	\$1,250.00
18	EngFOC	\$1,116.00	\$709.10
19	Midnight Sun Solar Car 2011	\$22,000.00	\$2,000.00
20	UW Alternative Fuels Team	\$8,912.00	\$2,000.00
21	UW Baja Sae Team	\$4,600.00	\$2,200.00
22	UW Clean Snowmobile	\$5,650.00	\$2,500.00
23	UW Debate Team	\$7,875.00	\$-
24	UW Formula Hybrid	\$6,500.00	\$2,500.00
25	UW FSAE Team	\$5,965.75	\$2,700.00
26	UW Robotics Team	\$3,799.00	\$2,750.00
27	UWIRE	\$7,490.52	\$-
28	UWMAV	\$1,230.00	\$300.00
29	Joint Proposal: Clean Snowmobile, Formula Motorsports and UWAF	\$3,139.00	\$3,139.00
Student Teams Total		\$81,302.27	\$22,048.10
Miscellaneous			
30	Children's Technological Education Network	\$4,500.00	\$-
31	IEEE Student Branch	\$615.00	\$130.00
32	Mechanical 4 th Year Design (UW Aquaponics collaboration)	\$3,846.00	\$414.00
33	Mechatronics 4 th Year Design Project	\$950.00	\$-
34	Mechatronics 4 th Year Design Project (WARG collaboration)	\$1,100.00	\$-
Miscellaneous Total		\$11,011.00	\$544.00
Grand Total		\$198,320.61	\$60,000.00

Upcoming Events Calendar

Wednesday November 16	Thursday November 17	Friday November 18	Saturday November 19	Sunday November 20	Monday November 21	Tuesday November 22	Check out up-to-the-day event postings on the EngSoc website at engsoc.uwaterloo.ca 
EngSoc Meeting 5:30PM CPH 3607	WEEF \$10 Million Celebration Running Club 5:30PM POETS Patio	Ettiquette Workshop	KW Santa Claus Parade Semi Formal - Space Disco!	Rock Climbing	Charity Pancakes 8:30 POETS Foyer	WEEF Directors Meeting Running Club 5:30PM POETS Patio Jazz Band Charity Gig	
Wednesday November 23	Thursday November 24	Friday November 25	Saturday November 26	Sunday November 27	Monday November 28	Tuesday November 29	
TalEng 8:00-11:00PM, Huether Hotel	Running Club 5:30PM POETS Patio EngPlay Architecture Show	Open Mic Iron Warrior Issue 5 Content Deadline Pubcrawl	EngPlay - 2PM and 7PM AL113/116 EngSoc Curling		Charity Pancakes 8:30 POETS Foyer EngSoc Story Night	Running Club 5:30PM POETS Patio GleePO	

The El Niño Effect: Thailand Floods Cripple Country and the Worldwide Computer Supply



ZAC YOUNG
2A NANOTECHNOLOGY

The 2011 monsoon season in Thailand has brought the worst flooding in five decades to over a third of the country. As the season has progressed, the floodwaters have grown and spread due to a near 40% increase in rainfall, impacting some of its most populated areas such as the capital, Bangkok. Over 500 deaths have been reported across the country and as floodwaters continue to inundate its most populated regions, the massive relief effort has been made even worse by having the economic hubs of the country threatened to slow or completely shut down.

The flooding began in provinces north of the capital in late July, which sustained long enough that some citizens were forced to live in the upper levels of their houses for two months. This prolonged flood had left behind a huge clean up effort, but has at least for now removed fears of waterborne disease in the north. Meanwhile, in Bangkok, 12 of the 50 districts have been evacuated as flood waters as high as chest height begin to invade the city centre. The fears of disease spreading in highly populated areas have arrived here in step with the murky, polluted waters which threaten to spark further complications. Transportation infrastructure, such as the subway and

main thoroughfares, has also been affected. Some preventative measures including the distribution of decontaminant balls filled with microorganisms have been initiated in the city. The effectiveness of these methods, as well as the potential false sense of security it brings, has been

subject to question. Thai authorities have cited the mass of the water as a significant challenge. The length of time that the flood persists increases the strain on people's resources. They are, however, taking measures to monitor any potential outbreaks and attempt to address them before they make

their mark on the mortality of the flood.

The flood has had effects not only within Thailand. As one of the major exporters of the world's hard disk drive (HDD) supply, the global computer markets have been affected. One manufacturer, owned by Western Digital, produces one-quarter of the global supply of "sliders", which are a key component in HDDs. Reports of up to a 10% increase in the cost of HDDs have been forecast as the global supply tries to compensate for these losses. Many other sectors have also been affected by the flooding in some of Thailand's most industrialized regions.

This impact serves as a reminder, in parallel with the Japanese tsunami, that not only is the world's supply chain very interdependent but also that countries such as Thailand may often be overlooked in the role they play in the industrialized world. Our consumables come from all corners of the earth. This is a testament to the wonder of globalization, for better or worse, that we often fail to recognize. The effects that nature can have on our human systems is highlighted by crises such as these floods. Not only is there the tragedy of the loss of life, which should be in no way ignored, but also resonating effects in the global network. Next time you boot up a laptop or grab an apple at the grocery store, take a moment to stop and think of the complex network our world has developed to bring that item to you.



Blog of a Bored Engineer - aiBOB.blogspot.com

Evacuees paddle their belongings through the flooded streets of Bangkok, October 24, 2011

Bookstore and Google Bring E-books to the Students



JACOB TERRY
2A NANOTECHNOLOGY

As students buy tablets and other complex mobile devices, it would be a safe bet to say most of us would undoubtedly prefer to replace our bulky textbooks with one device that lets us access as many learning materials as we need to without needing to think about how much we can put in our backpacks at once. Until now, we've been resigned to purchasing giant, expensive textbooks from the University of Waterloo Book Store, happening to find them from the dismal selection at Feds Used Books, or finding an upper year willing to sell them. As people feel more comfortable just sending around files to access course content now, there is a growing number of people who just find a PDF of the textbook and download it instead. To combat this and to offer a more competitive choice, the Book Store is now offering e-books from Google.

When a new technology is released to the masses, people try to find ways to use this technology to reduce the dependence on the number of things they need to keep track of in their life and make tasks simpler. With the computer, people replaced documents and files that normally would have been stored in binders with virtual documents. With the smartphone, people replace task managers and address books with virtual ones stored with the phone.

With the tablet, now becoming more successful because of the iPad and potentially the Kindle Fire, there is a large market emerging for replacing traditional media with particular respect to magazines and books with virtual e-books and applications that replicate or extend the functionality of traditional print media. When there is no easily accessible digital option available, many people will take to the illegal digital file they've found from their

friends or from some website. Not only is it cheaper, it's also a lot more convenient than heading to the Book Store and exchanging your life savings for a bulldozer to bring your sumo-wrestler sized pile of books home.

The Book Store's decision to offer Google eBooks is a good step towards embracing the digital age in the education market. From the selection on the Book Store's website so far, it looks like there's a fair share of books that are available for purchase in a variety of subjects. E-books purchased through the Book Store's website are readable on iOS, Android, computers, the Nook, the Sony Reader and the Kobo Reader. The Kindle is not yet supported because of limitations in Google's for-

mat. E-books are stored on Google's servers, so there is less concern of losing them in a catastrophic event such as a hard drive failure, but Google also theoretically has the ability to remove e-books instantly as it sees fit.

While having Google eBooks are welcome, this should be only a stepping stone for the Book Store's push on electronic textbooks. The Kindle Store has a library of e-books that rivals, if not surpasses, Google's selection. If the Book Store is able to cut a deal of sorts with Amazon to get the Kindle Store as another option through the Book Store's website, that would be a benefit both to consumer choice and to the selection available to students. It would then be convenient if the

Book Store could instead offer a chart, much like the in-store availability tables of large franchise store websites, that would let you know if the book you wanted was available in the Book Store, through Google eBooks or through the Kindle Store. I would suggest the same for Apple's iBookstore should the selection improve, but unless there is a change to Apple's store policies, the chance of the Book Store making some sort of profit from Apple's iBookstore sales is slim.

Even if the Book Store doesn't manage to share profit with Google's competitors, it would still be beneficial for students if the other e-book stores offer a better selection of textbooks. A better selection across all e-book stores would drive competition between stores to offer the textbooks each student needs. Since each store caters to a subset of all the devices available for reading, it would help students since they could get it off the store that supports the devices they use to read their textbooks.

For our benefit, we can only hope that in the next few years enough textbooks are offered on online stores that we can replace that expensive heavy box of books with an expensive light tablet-like reading device. Even those who don't want to lose the ability to have something tangible would still have the option to buy the physical copy, but at least there would be a choice. Having all our textbooks legally at our disposal with a quick swipe or tap, all stored in a portable yet reading-sized device, would make it easier to bring textbooks with you when you need them most and would have a small yet significant positive impact on your ability to learn. When you're going between classes and are trying to carry as much as you can to survive classes, having that extra backpack space makes all the difference in the world. It's good to see the Book Store doing its part to bring this to reality. If their selection improves in the next couple years, expect to see a lot less people in that long and tedious line-up in September.

The new Google eBooks section at the UW BookStore

Movies That Deserve More Love: Five Animated Films not from Pixar



NANCY HUI
2A CIVIL

November is a really boring month. It follows in the wake of midterms, which may have turned out badly. It's sandwiched between two really festive months, but November itself has only Remembrance Day, which isn't really an excuse to drink and make merry. In the spirit of combating November, here are five animated English movies that have aged relatively well and should be standing shoulder-to-shoulder with recent Pixar offerings, listed in order of seriousness.

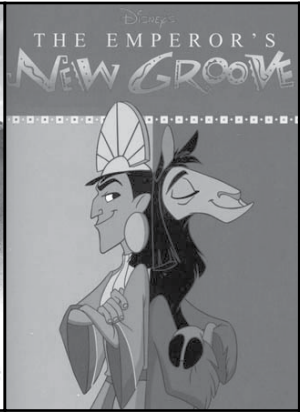
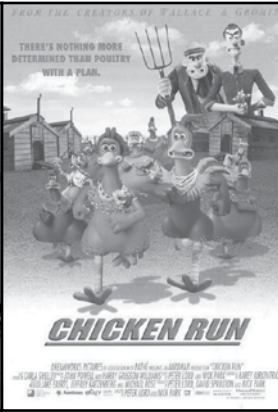
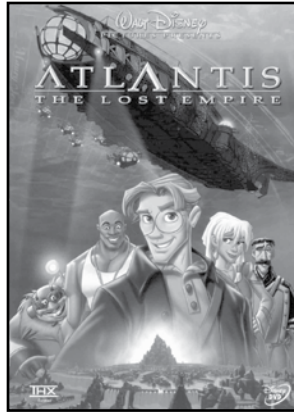
The Emperor's New Groove (2000)

The Incan emperor Kuzko is turned into a llama by his evil witch advisor and shipped out into the backwoods of his kingdom. In order to travel back to the capital and reclaim his throne, Kuzko must join forces with the good-hearted, humble Pacha, whose village he was planning to pave over to build a summer palace. Pacha himself doesn't really have time to trot a llama across the country but agrees anyways to save his village.

The Emperor's New Groove makes no pretences at seriousness or Academy Award-mongering. This is good, because it means that the movie can be as irreverent and careless as a Saturday morning cartoon. The plot is a big happy excuse to string together neurotic llama jokes and ridiculous visual gags, both of which are forces of pure and unequivocal good in the wasteland of modern animation.

The Road to El Dorado (2000)

Two guys Miguel and Tulio win a map to El Dorado in a game of loaded dice and stowaway on a ship on its way to the New World. Along with a stolen horse, they discover the City of Gold and are mistaken for gods. Miguel and Tulio struggle to maintain



their deception and to decide whether to stay and be worshipped or to bring their discoveries back to Spain.

The bromance of Miguel and Tulio deserve to go right up there with Harold and Kumar, Timon and Pumbaa, and the two incompetent soldiers from Pirates of the Caribbean. The whole movie runs off the development of their brotherly relationship, so that by the time they leave El Dorado, it's really all they need. I completely disagree with the addition of the love interest the producers decided was necessary to divert viewer attention away from the clear alpha couple. Ah, it doesn't work anyways.

Chicken Run (2000)

Ginger the hen has spent her life looking for a way for the chickens on Tweedy's Chicken Farm to escape their fate as pot pies. But her life is thrown into a loop when a rooster by the name of Rocky crash-lands into the complex and claims he can teach them all to fly out and over the fence.

This is the best movie featuring talking livestock that you could ever hope to see. Ever. As you might expect from the people who brought the world Wallace and Gromit, Chicken Run sports a particularly wicked brand of humour that doesn't gloss over the details of chicken-killing. (Hint: It involves an Indiana Jones-esque minecart sequence and boiling vats of doom.)

The chickens themselves exude contagious warmth, zeal, and desperation. Their demeanor and plotting (Mr Tweedy: "Oh, yes. Those chickens are up to something.") remind me of prisoners in war movies, except Chicken Run serves up more moral fibre and pleasant entertainment than any Oscar-gunning war movie in recent memory.

Atlantis: The Lost Empire (2001)

Milo Thatch is an extremely nerdy early-twentieth-century cartographer/linguist/plumber toiling in the basement of the Smithsonian because his plans to find Atlantis are always shot down by the museum directors. But a wealthy benefactor takes interest in him and Milo finds himself on a dream expedition to find the titular mythical city under the sea with an extremely sketchy crew that includes a chain-smoking cantankerous communications officer, a medical doctor who looks like Mr. Clean, and a geologist raised by mole rats in Paris.

This is a great movie in the vein of 20,000 Leagues Under The Sea. From the steam-punk-influenced submarine to the crumbling majesty of Atlantis, it's beautifully animated, thanks to the direction of Hellboy's Mike Mignola. He makes all the explosions and beams of light in the final sequence so beautiful that it'd make James Cameron and his oversized budget weep tears of futility. Also, the crew's dialogue is really snappy

for circa 1912 ("To whoever took the "L" from the "Motor Pool" sign, ha-ha, we are all very amused."). Atlantis: The Lost Empire is bold, brisk, and breathtaking. Definitely my favourite movie on the list.

The Prince of Egypt (1998)

Moses, raised as ancient Egyptian royalty, discovers that he was adopted. He embarks upon a spiritual journey to come to terms with his baseborn birth and returns to his homeland, asking his brother the Pharaoh to free the slaves of Egypt. In case you couldn't tell, The Prince of Egypt is adapted from the biblical tale of Moses.

The Prince of Egypt is the Ben-Hur of the age of traditional western animation: a critically acclaimed, Oscar-winning historical epic that was forgotten soon after since Disney didn't make it. That's too bad because this movie is nowhere as stuffy as you might expect it to be, until the plagues of Egypt throw a shadow on things. But the first part of the movie, during which Moses and Ramses are still princes and brothers, is as effervescent as any Disney movie. Watching them grow apart after Moses' revelations is heartbreaking.

The next time you are looking to watch a great animated movie consider one of these five great animated movies, they deserve equal placement on your shelf with any Pixar movie.



LEAH KRISTUFEK
1A CHEMICAL

October has ended, and with it, so has the season for bikes as an easy mode of transportation. As the weather gets progressively cooler, biking becomes an increasingly unexciting option to quickly go from one place to another. For many of us, a bicycle is the ideal mode of transportation. Not only does it cost nothing to fuel it, but bikes can be low maintenance, highly reliable and very good for a de-stressing commute after a long day of classes. However, our bikes are not as safe as we would like to believe. Occasionally someone will return to the location where they left their bike only to discover a lock destroyed by bolt cutters in the place of their ride.

As with most large places, theft happens, and the University of Waterloo campus is no exception. Between January and October of this year, 79 bikes have been reported stolen to campus police, while many more bike thefts have undoubtedly been left unreported. While the number of thefts may seem small in comparison to the 3,247 bikes reported stolen in Toronto last year (Toronto Star), the loss of a bike can prove highly problematic. Whether you are looking forward to a relaxing ride home or racing to make it to a class, discovering that your bike has been stolen guarantees to put a damper in your day, and many days after that. The

Iron Warrior's own Editor-In-Chief, Jon Martin, had his bike stolen over a year ago. It has yet to be replaced. Bike theft is not cool, but it is inevitable when nearly 30 000 of us are clustered in this tiny campus. The concentration of students and bikes makes

of thieves, the people you see around you every day are unlikely to engage in any kind of theft whatsoever, but in the off case a bike is going to be stolen it's always best if the bike isn't yours.

Protecting your bike begins with locking



More locks are not always better, be smart and you can protect your bike effectively

us a target for ner-do-wells both from within our student body and from outside. People who are looking to reuse your bikes parts, or maybe even resell your entire bike on kijij. This is by no means a large amount

it. Staff Sergeant Dale Roe, whose job includes security operation on campus, can't stress enough the importance of a sturdy lock. 'A bike lock has two weak points, the chain and the lock itself' - and of course

the system is only as strong as its weakest component. Though chains and woven steel cables give the user more flexibility in securing their bikes, the chains can be easily snapped off with a good pair of bolt cutters. It takes mere seconds and will not be noticed by passersby. U locks on the other hand can only be broken with considerable noise and effort, making them a better option for securing your bike. EIT, the dinosaur building next to DC, has been recommended for its superior freestanding bike racks and protective overhang. MC is also great for offering some protection to your bike. At this point, after all this effort, you might as well have two bike locks. Leave one u-lock on campus and carry another one with you so when you lock up both wheels can also be secured to a bike rack. If it's difficult to detach your bike from its surroundings, it's most likely that thieves won't bother. Locking all removable components like seats and handle bars to the bike frame is also advisable since biking without those parts proves quite difficult, but that's really up to you.

In addition to making your bike difficult to access there is significant strategy involved. 'Always lock your bike in an area with high pedestrian traffic' Jared Hébert, a volunteer at the SLC bike shop, advises. The best places are free of lampposts, bushes, and other objects which will hide a pair of boltcutters from view.

See Bike Thefts Page 13

Musical Musings: Sam Roberts Band Concert



NOUHA JAVED
2A CIVIL

For a concert to be good, you must have three things as you leave; ringing ears, sore feet and a parched throat. Luckily for me, I had all of the above in my possession last night after seeing the Sam Roberts Band live. I've always been a huge fan of Sam, partially because of his self-deprecating lyrics, and partially because of his guitar. Both were in full force at the show; he made us chant 'I think my life / Is passing me by', while making us wish that we had a real guitar instead of the air versions we were rocking out on. And there's something about Sam's songs that make him so good to chant to; a combination of a beat that has a perfect head-bobbing frequency, and lyrics that are wordy and anthemic. The words have a regularity to them that makes it easy to relate to him, to put ourselves in his place, but still have this old rock and roll feel to them. This perfect combination was displayed again and again, when we sang to 'Hard Road' (There ain't no road / That ain't a hard road to travel on'), and 'Where Have All The Good People Gone?' ('Bangkok to Babylon / Where have all the good people gone?').

The band played a great mix of his classics, songs like 'Bridge to Nowhere' and 'An American Draft Dodger in Thunder Bay', and tracks from the latest album like 'Without A Map' (my sore throat came primarily from screaming 'I'm without a map / I'm walking into a trap' repeatedly. Being someone who is easily impressed by sparkly things, the brilliant coordinated lights sealed the deal for me. During Sam's gorgeous solo ballads ('Uprising Down Under' being my favourite), the beams of light focused on him, making him look like the Holy Spirit of Sad Love Songs. During the intense rock songs though, the lights went as crazy as the audience, creating a feeling of instant trippy-ness. And then, every concert-goes worse nightmare, the show began to wind down. Sam and the band made it a bit easier for us though; the last half hour was more like a jam session than a song. What originally was 'Mystified, Heavy' (I know it was only dream / Delicate was drag-onfly wing') transformed into a sine wave of guitar, bass, drums, and tenor saxophone. Coordinated with the lights, I actually lost track of time. The only thing I remember from that last half hour was giggling at the bassist, who had actually doubled over while playing.

Lastly, I'm not one to complain, but what about 'No Sleep' Sam? Way to disappoint the fans.



The Fortnightly Review — America: Oops!



CHAD XU
2T MANAGEMENT

I love watching the Republican debates. I love watching them because it's relevant to Canada's future on a subtle level that most of us would rather deny. But more importantly, I love watching them for its entertainment value. They're entertaining because postulating the notion that one of those candidates could potentially become the next President of the United States is a terrifying thought (you see, I am sadist who is entertained by terrible and frightful thoughts).

Going along with that notion, the award for the most "entertaining" candidate of this week's debate goes unequivocally to Rick Perry. For those of you unfamiliar of the reference I'm making, take a minute to visit Youtube, type "Rick Perry" into the search bar, and click on the first non-featured video. That's right, it has officially gone viral.

It would be rather futile for me to describe the content of the video with mere words, for I have not yet mastered the linguistic diction to convey the raw emotions one would feel from experiencing the visceral train-wreck first hand. So instead, I'll just leave the transcript right here:

Rick Perry: ...and I will tell you, it's three agencies the government when I get there, that are gone. Commerce, Education and ahh, what's the third one there, let's see...

Ron Paul: You need five.

Rick Perry: Oh five. Okay.

Ron Paul: Five.

Rick Perry: Commerce, Education, and ah, the, umm...

Rick Santorum: EPA (Environmental Protection Agency).

Rick Perry: EPA, there you go (chuckling) -- no...

Panel: Seriously, is EPA the one you were talking about sir?

Rick Perry: No, sir. No, sir. We were talking about the umm, the agencies of government, EPA needs to be rebuilt. There's no doubt -- there's no doubt about that.

Panel: But you can't name the third one.

Rick Perry: The third agency of government I would do away with Education, uh-hhh, the uh-hhh...Commerce, let's see...

Herman Cain: Oh my.

Rick Perry: I can't -- the third one I can't sorry. Oops.

Well, at least we can appreciate why Rick Perry wants to do away with the Department of Education.

The intermittent "uhh's" and brief pauses in his speech may seem like seconds to us, but there is no doubt that beneath the feigned smile that an entire lifetime had gone by for Perry as he rampages through his memory,

searching for the right words. To those who are wondering, the third agency that he so desperately tries to remember is the Department of Energy.

If this were the Oscars, then Ron Paul and Rick Santorum may very well deserve the award for best supporting actors for their riveting troll-foo performance. Honorable mention goes to Herman Cain, for his delivering the final coup de grâce.

Rick Perry may be merely running for president at this point, but he is the current Governor of Texas. He is also the current leading Republican candidate, ahead of Mitt Romney and Herman Cain. This is unsettling. It is unsettling not only because of the video, it is unsettling because it fills me with a sense of unease in believing that someone with a GPA of 2.5 with a degree in Animal Science could end up being the next President of The United States.

No, perhaps I'm being too narrow-minded. After all, the underlying value of the American Dream preaches equal opportunity for all, regardless of their background or upbringing. Bush's Harvard MBA certainly did not give him the foresight to prevent the global recession in 2008, which traces its roots back to the policies of Freddie Mac and Fannie Mae.

America is an interesting country with interesting people. However, its allure is not without a dark side. Part of the social paradigm that makes America a great country in theory also lends itself to the pitfall of creating a wide social-economic divide between different social classes. The United States currently has a Gini coefficient of 0.4 (on par with Cambodia) and also one of the highest amongst developed nations (the Gini coefficient is a measure of the income inequality within the population of a country, where a low score indicates lower inequality and vice versa). Though the social-economic borders may be invisible, its effects are not. In the city of Providence, million-dollar mansions are flanked by sprawling ghettos no more than a few minutes walk away; the surreal scenery flashes before my eyes everyday as I bike down College Hill.

It is this social-inequality issue that serves as the core subtext surrounding the recent political debates, and it is big on the list of things for the next President of the United States to tackle. Or at least pander that perception to the public. For reasons related to this, Obama's first four years have apparently left a bad taste in people's mouths. The same people who voted for Obama in 2008 are now part of the Occupy Movement that's dotting across the nation. With an approval rating at an all-time low of 38%, Americans are once again intoxicated by the belief that perhaps "the grass is greener on the other side." But is it really?

The irony is heavy on this one. Maybe Ron Paul will save us all.



Photo: Reuters

Rick Perry (left) and Ron Paul (right) debate about federal departments



Kitchener-Waterloo Santa Claus Parade

**Waterloo Engineering will be there
Volunteers needed, everyone is welcome!**

Help Decorate the Float
Meet at 3pm on Friday, November 18th at the Bauer Warehouse near Wes Graham Way and Bearinger on North Campus

Walk in the Parade with us!
Meet in the cue at 9:30am on Saturday, November 19th south of University on King

We will have Santa Hats, Hot Chocolate and Candy Canes for volunteers. Hope to see you there!



Bike Thefts on Campus

Continued From Page 11

Also try to 'park your bike next to a nicer bike with a weaker lock' or some variation there in so that your bike is not the most appealing one on the rack. In short, the uglier looking the bike, the better; you do not want to have the shiniest bike around. If you are a hard core bicycle rider keeping a cruddy bike for commuting and a good bike for pleasure riding is advised. The time of year is also key; few bike thefts take place in the winter while the summer with its reduced student population seems to be less targeted by thieves.

Between September-October and March-April are the times when the majority of bikes are reported missing, according to Roe. He also notes that making your bike distinctive is a good deterrent, since thieves don't want to risk being recognized. Even years later you might be able to recognize your stolen bike. In short, make your bike as unique and distinctive as possible! Using an engraver you can carve your initials or a number unique to you, directly in to your bike. If you want to go a little bit further you could paint your ride neon green or maybe a stylish purple? It is tough to steal a truly styling bike since people will associate that 'awesome bike' to the 'awesome person who rides it'. An association thieves seek to void. Take a picture while you are at it, identifying your bike will be way easier.

What do you do if your bike is stolen? Whether your bike is a rust pile that is just barely able to get you from point A to point B or a sleek beautiful vehicle epitomizing the magnificence of design, reporting the theft is important. Knowing the frequency and locations of crimes allows campus police to map out the occurrences and develop a better plan to prevent future thefts. Though your bike may not have been spared, more frequent monitoring by police may help protect someone else's. A lot of thefts may even warrant several more well placed video cameras. (Yes, you are being watched!) If your bike is stolen off campus you are encouraged to call the Waterloo regional Police while you can report on campus thefts by calling '519 888 4911' (note the clever play on 911.) or contacting campus police at x22222. You can even go to the police website; <http://police.uwaterloo.ca/>. The web site even has a helpful page online where you can record the serial numbers of important possessions, like bikes and laptops and save them with the police in case you are the victim of theft. 'No one thinks they will become a victim until they are' Roe says. If you think you see a bike theft in action, contact the police, get a de-

scription of the person stealing the bike and take a moment to memorize what the bike looks like. Often few people realize they are witnessing a crime taking place.

Stolen bikes which are picked up are stored for 90 days, but sadly the bikes are seldom returned to their owners. Bikes are kept at the campus police station on campus, located north of DC, or you can check with the Regional Police Northern Division, located at 14 Erb St west. It is recommended that people who have been the victims of bike theft check in with the police every two to three weeks. However, reclaiming a stolen bike is difficult. For police, it is much like finding a twenty dollar bill; there

passport number or your student number in to less visible parts of the bike frame. This helps to convince police of ownership. Having the serial number or a photograph can't hurt either.

You might also be able to repurchase your bike from an online site. Though occasionally it is simply a 'Joy rider', who grabs your bike to get them from one place to another before unceremoniously dumping your prized possession in bushes or a stream, more often the thief looks immediately at resale. Keeping tabs on popular sites may reunite you with your favourite transportation device. This is not necessarily the case, however, for most stolen bikes there is

that aren't claimed?

After the 90 days bikes are handed over to the campus bike shop where volunteers return the abandoned bikes to working order. These are the same volunteers who will help you repair your bike, so be nice to them at all times. At the beginning of the spring and fall terms, a bike auction is held where you can get a bike for a reasonable price. Bikes here also include bikes deemed abandoned by campus police. In order to maintain a clean, well working campus, police tag seemingly abandoned bikes with a notice requiring the owner to remove their bike in a certain amount of time. If the tags are not removed, bikes are taken and held for 90 days after which they go in to the bike auction. You can't just leave your bike on campus between terms; it will not be here when you return!

Admittedly this article is not the best timed; my advice? Cut it out, put it on your fridge and forget about this little piece of paper until biking has again become an appealing option. As you move out of res or new people move in to your apartment, they might possibly remember that getting a bike is as easy as attending the bike auction in the SLC, or maybe they will decide to better identify their bike. As rumour has it, one first year actually went through three bikes, and \$2,500, before finally breaking down and getting a commuting bike. Be prepared, don't let that victim be you.

Before closing this paper, take a few moments to consider the other things that could be stolen as we all retreat inside to study in the warmth and comfort of warm school buildings. Many phone and laptop's get stolen as well, especially if the owners have left them unattended. While you are putting away your bike also take a moment to write down your serial number and make sure you have all your receipts. More cell phones and laptops are stolen than bikes, and in losing electrical devices you are also in danger of losing valuable or sentimental data as well as being at risk for identity theft. Never leave your things unattended, with the cost of tuition people may be getting desperate! Seriously though, crimes are carried out by students as well as people from outside our community. You will be a victim if you aren't a little bit cautious. If you read the posters and follow them than your years here at UW will be fun and (relatively stress free). Never forget, you too can become a victim. Victims are the people who don't think they will ever be the victims less often are they the people who know they could be.

Info from:

<http://thestarblogs.com/cycling/2011/08/bike-theft-on-the-rise-again-say-toronto-cyclists.html>



Top: Might keep the thieves away from your bike, but will stop you just as efficiently

Bottom: Strong U-Locks don't have to be inconvenient, UW and area have some great bicycle trails, grab a lock then check them out.

are no distinguishing features to prove who the owner is and there are too many people wishing to claim it. If hoping to recover your stolen bike come armed with a photo of your bike and lots of detailed knowledge to convey to the police that your bike does in fact belong to you. You can use an engraver to scratch an important number like a

no happy ending. Once your first nice bike has been stolen it may be time to sit back and come to terms with the fact that for your five years in university town, a pretty bike with all the gadgets may not be the best option unless you can part with a lot of dough, a reliable single speed perhaps? This brings us full cycle, what happens to those bikes

Giant Asteroid Passes Earth: Chaos Did Not Ensnue



NINA FENG
1A ENVIRONMENTAL

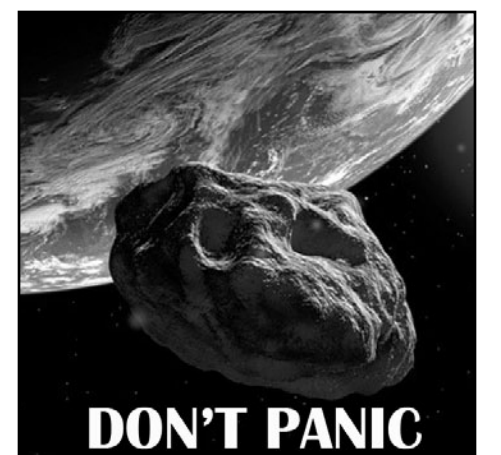
When the asteroid 2005 YU55 was discovered six years ago, astronomers feared that it may well have been headed towards a collision with Earth. Travelling at a speed of over 45,000 km/h, the impact of such a massive piece of space debris on land would have resulted in a 6.5 km wide crater, over 500 m deep. Had it struck water, 70-ft. high tsunamis would have engulfed the world's coastlines, destroying coastal development through flooding and erosion. It is likely that a large loss of both human and natural life would have been unavoidable, further complicated by changes in climate and the chemical composition of the atmosphere.

However, as the asteroid approached over the years, it became more and more apparent that there was no real chance of collision. This was confirmed on Tuesday, November 8, when we didn't meet the same alleged fate as the dinosaurs. At 6:28 p.m., the 400-meter wide, charcoal-coloured space rock whizzed by our planet, approaching a distance of 325,000 kilometres away from the centre of the Earth, the closest it's been in 200 years. At that distance, the effects of its gravitational force on terrestrial phenomena such as tidal activity and the movement of the tectonic plates was negligible. It passed us rather uneventfully, though when it draws an even more alarming 270,000 kilometres away from Earth in 2094, it may be a different story.

Asteroids are deemed as potentially hazardous if their orbits approach or intersect the orbit of the Earth. Though no

impact occurred, it was still a close call, considering it even came within the orbit of the moon – about 0.85 times closer. This proximity without danger has caused astronomers to take it as a great learning experience, especially due to the relative rarity of such an occurrence. Though close to 20,000 different asteroids are currently being monitored due to the nature of their orbit, they seldom actually manage to pass so close to us. The last similar event occurred in 1976, and the next is set for 2028. Invisible to the naked eye, astronomers used special equipment to study the asteroid nonetheless. It is believed that an asteroid like 2005 YU55 was responsible for the mass extinctions 65 million years ago, as well as the introduction of carbon to the Earth shortly after the Earth's formation. This asteroid may answer many ongoing questions relating to the formation and nature of the Earth itself.

This time, we learned from an asteroid, hopefully next time we aren't killed by one. We managed to dodge an asteroid, and humanity may be okay for a little while, as a strike by such an asteroid is thought to only occur once every 100,000 years anyway.



T Cubed: Adobe Kicks Google and RIM in the Flash Player



JACOB TERRY
2A NANOTECHNOLOGY

One of the biggest selling features that RIM and the Android device manufacturers have pushed in commercials and announcements is Flash support in their products. You can see how important the manufacturers perceive Flash by viewing their promotional material. On the Playbook website, RIM proclaims it offers the “uncompromised web”, with support for HTML 5 and Flash 10.2 giving you “all the Internet has to offer”. RIM also released an ad focusing entirely on their tablet’s ability to utilize Flash Player in web browsing. Samsung states on their website that the Galaxy Tab 10.1 lets you visit “thousands of top websites” that use “rich Flash applications”, and that the Galaxy S II’s “Adobe Flash Player capabilities let you get the full multimedia experience”. All this support behind it would have you believe that Flash is still going to be prominent and expanding in the near future, but this month Adobe announced that it will no longer develop Flash Player for mobile devices or TVs, throwing a wrench into the plans of these companies.

Flash Player has been around for almost as long as our fellow first year engineers, providing web developers with a way to include animations in their webpages. The term “animation” has become almost symbolic at this point, as Flash Player is also used to display video, games and interactive websites. During Flash’s peak it was uncommon, to say the least, to find a website that didn’t implement Adobe’s technology in some way. Some websites that used heavy animation were even completely Flash based. You may remember how many sites had loading bars on them even a few years ago. While many websites we use often still use Flash to display videos, there are now often fallback methods that enable users without Flash to be able to view them, typically now in the form of the HTML5 <video> tag.

Apple and Microsoft both have reduced their dependency on Flash to some degree over the past few years. Since the release of the first iPhone, Apple has not allowed Flash Player installation and this has extended to their other iOS devices as they have come out. Apple also now ships new Macs without Flash Player by default, requiring users to install it via Adobe’s website.

In Windows 8, which Microsoft is set to release next year, the Metro version of Internet Explorer 10 will not have any support for plugins, including Flash Player. As for Windows Phone, Adobe and Microsoft indicated that they were working together to bring Flash Player to the operating system since March of last year, but that clearly never came to fruition and it seems pretty clear now that it won’t any time in the future. Microsoft is struggling to find success with Silverlight, its own Flash competitor, but still hopes to keep the development environment around as an easy way to create Metro applications.

While RIM and Google still have Adobe’s support for their existing configurations of Flash Player, Adobe won’t support any new operating system versions, chipsets, or browsers; essentially any sort of modification to an existing system following the release of Flash Player 11.1. RIM, who was arguably the most aggressive at marketing their Flash Player compatibility, has decided to start developing their own derivative of Flash Player in response to this news by licensing the source code from Adobe. Google hasn’t announced that they will develop their own version of Flash Player, but considering the number of devices they would have to support with the number of Android configurations available, they may opt to join Apple and Microsoft in fully embracing HTML5 and its related technologies (which I will refer to hereafter as just HTML5 for simplicity). This would make sense from Google’s standpoint given how strongly they’ve been pushing these technologies in their own web applications, especially in Gmail and their Google Apps. Considering how long it took Flash Player to arrive for Android and how mixed the user experience

has been with the plugin, Google might be better off anyway having the plugin removed entirely.

The reasoning Adobe gave for finding no need to continue mobile Flash Player development was the ubiquity of HTML5 in the mobile space. HTML5 is supported by all the major mobile operating systems and Adobe is throwing its support behind helping advanced web developers utilize HTML5 by shifting resources towards tools that will make it easier to create that content. Upcoming editions of Creative Suite will have more integrated HTML5 tools. Adobe has a beta of Edge, its HTML5 animation tool, which has been out for some time that could end up being its own product or folded into Flash Professional (not to be confused with Flash Player, Flash Professional is the development environment).

Adobe’s focus on HTML5 doesn’t mean they’re getting rid of Flash entirely. It should be noted that they are only getting rid of Flash Player for non-desktop devices, which means it will still be around for Windows, Mac, Linux and Solaris for the near future. Adobe claims to be already developing Flash Player 12, which is set to bring a whole set of new features to push Flash’s capabilities on the desktop. They are also suggesting that mobile app developers use Adobe Integrated Runtime (AIR) to package Flash apps natively for the iOS App Store, Android Market, Amazon Appstore for Android and BlackBerry App World.

While Adobe’s Flash applications, now regulated to the desktop browsers, and AIR applications might be useful for developers who want to create everything from the same development template, is it the best way to create these applications? The biggest detriment in my eyes of Adobe being in control of the whole package is that developers have to rely on Adobe to keep up with new technologies on each device before being able to implement them. If a manufacturer provides a new technology that they implement relatively quickly into a software update (such as when Apple enabled in-app purchasing or Game Center), then developers who are de-

pendent on Adobe will have to wait for Adobe to add support for these technologies into an AIR update before packaging their applications for release.

So while Flash might be around for a while longer, it doesn’t appear that it will be used in the same way in five or ten years as it is now. Instead of being used to create its own files that get played within its own proprietary plugin that has to be installed on every computer, it will probably be used to provide developers an inefficient, lazy yet simple way to create applications for multiple devices. While by design it will never be as performance efficient as creating applications directly for each device, it could prove to be a stepping stone for newer developers towards creating applications natively. Some may claim that Flash Player becoming less relevant is a bad thing, but even for Adobe it paints a bright future, and those who are a fan of the Flash development environment can find comfort in the fact that AIR-packaged applications will probably have support for a long time into the future. When HTML5 looks like it’s starting to be able to accomplish most of the things Flash is able to do, why would anyone design multimedia for a bloated runtime environment when you could code once and have it run natively on every device by design?

Adobe has made some poor decisions on occasion to protect its own interests, but this is one that shows that it’s aware of what it can do well and what it can’t. If Adobe is throwing all of its support behind HTML5, expect a lot of people to start making animations, embedding videos and potentially even creating games that are rendered by the browser. As HTML and its supporting technologies get more advanced, browsers will need updating to see these new animations and games, and being able to run the latest browser will become more important than ever before. With the number of people still running Internet Explorer 6 and 7, let alone its other versions, maybe this isn’t a bad thing, and could be what’s needed to drive web technology forward.

The True Cost of Coal: Mountaintop Removal and the Fight for our Future

ROB REID
EWB CONTRIBUTOR

As Canadians, we get under 17% of our electricity from burning coal. As engineers, we see coal-fired steam engines as an antiquated invention being phased out in favour of more viable energy sources. In the US, however, nearly half of their electricity still comes from coal-fired plants. For the people of the Appalachia, coal is more intimately connected still as the coal industry continues their long-dominance in the region, most recently with the practice of mountain-top removal mining. This method of mining involves blasting entire mountains from the top down to more easily access underlying coal-rich strata. The overburden is pulled into adjacent river valleys by 22-story tall machines called draglines during mining, and about a third is pulled back to the mountain site to partially restore the original shape after the mine closes. Because the US Clean Air Act requires coal to be washed to reduce associated SOx emissions, tailings are also retained on site behind earthen dykes. Currently, 3000 km of rivers have been filled with the overburden of the 180 000 hectares of mountains they have been mined. There has been widespread opposition to this type of mining, as it leaves vast tracts of the Appalachian mountains irreversibly altered, causes downstream environmental effects due to both contamination and disruption of ecosystems, all while doing an incomparable amount to improve

the lives of the people who live and work in the region.

Although mountaintop removal is a new technology, the situation of environmental destruction and labour abuse has been the same in the region of hundreds of years. In 1921, this culminated in the Battle of Blair Mountain, an armed standoff between over 10,000 miners with police, coal company-hired union-busters, and eventually the US army. Over a million rounds were fired, bombs were dropped, around 100 people died, and nearly 1000 were arrested. Although this was the largest armed conflict on US soil since the Civil War and an incredible story of resistance by common people, the conflict is glossed over in history books.

On October 26, an American art group called the Beehive Design Collective vis-

ited the University of Waterloo to present their newest poster entitled “The True Cost of Coal”. The poster is a culmination of two years of research, a long drafting and reviewing cycle, and the combined effort of eleven artists working at once. The massive scene (about 2 metres high and 5 metres long) chronicles the history of coal production in Appalachia from early colonization and toward possible futures, looking from immediate realities to underlying systems and incorporating aspects of society, economy, and environment. Beehive Design travels around North America to share its posters, which are meant to use art as a way to break down the disconnection between people and the realities of the world around them.

Although the poster features feats of mechanical, electrical, geological, and chemi-

cal engineering worthy of “Big Things with Will Zochodne”, it brings into question the role that engineers played at the time of the events portrayed and should be playing going into the future. Engineers do not orchestrate the economic, political, and legal systems that determine which industries will be profitable and which people will benefit from them, but we do enable their development. When talking with friends deciding whether to work for companies with records of environmental and social destruction, a common argument is “If I’m not working there, someone worse will be”. While this may be true on the individual level, as a profession, engineers have a lot more say. As the people who work hard to develop the best technology possible, we do a great job of facilitating project implementation that makes it possible for society to benefit, and for governments and private companies to become rich and powerful. Whether we decide to look through the PR strategies of industry, become educated on true costs, and advocate for technological (or other) solutions beneficial to society, or simply be pawns allowing the plans of others to pan out is a decision that is up to each of us as free agents and all of us as a profession.

For those wishing to learn more about mountain-top removal mining, alternative energy sources and socioeconomic structures, or to obtain a copy of “The True Cost of Coal” poster, Beehive offers access to copyright-free graphics and other materials at their website; beehivecollective.org.



Getting the Perfect Body

CBG INC.
3N SEXUALITY,
MARRIAGE, AND FAMILY

Howdy sexy engineers

So we know we promised last issue to give you tips on how to get a date, but after our emails got flooded after our first issue, we decided to cover a different topic.

Dear CBG. Thank you for your amazing advice in the first issue. The tips you gave really boosted my confidence and allowed me to make great first impressions. However, I need your help. Although I believe I can now meet people with perfect ease, I am worried I won't make a good impression because I don't have the perfect body. Much appreciated:

Everybody knows that external appearance is of prime importance when it comes to finding your partner (or if you believe in it, your soulmate). But how do you get the physique that compares to the boys on L.M.F.A.O.? Going to the gym takes too much time, especially for you boys and girl

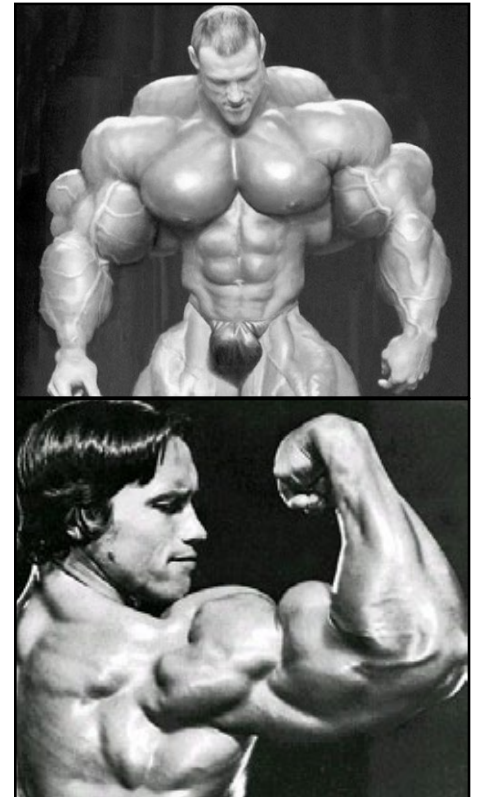
in Engineering who have to spend so much time in the classroom and labs (and obviously not in bedrooms).

We at CBG Inc. encourage you to try to go to the gym at least once a week, for just fifteen minutes. Now, you might be pondering "Are fifteen minutes really enough?" Short answer: YES IT IS! Let us explain. It is all about being efficient. Some so-called "trainers" tell you that you need to do three reps of 10 at whatever weight you may lift (I bench press 30 lbs). Well, as engineers, you already know all about efficiency. Instead of three reps of 10 at 30 lbs, why not do one rep of 3 at 300 lbs. Do this at all machines, and you will be set. Some trainers may tell you to do cardiovascular exercises. Please kindly disregard them. They are losers. Cardio will actually make your heart beat more than it normally should hence causing premature failure (if you know what we mean *wink wink*).

Do you not have any time to go to the gym? That is ok! There are ways to get the workout you need right at home. First

way to do it is get on your couch and put in P90X. Through the power of osmosis, you will get the workout you need. The procedure is actually kind of simple. You procure a copy of the P90X workout regimen and play it on your DVD player. You can then proceed to do all of your daily activities as usual and you should end up being perfectly fit (quite like Jason Statham). Another way is to see Bruce Willis movies. When you see a man with the charisma of Bruce, your eye glands produce steroids which get absorbed into your lacrimal duct and reach your blood through the complex pathway of the Krebs cycle which ultimately should deposit iron into your abs (which later combines with cellular carbon) producing abs of steel.

Furthermore, it should be noted that all of our studies are not in fact approved by the FDA and the International Association of International Associations in any way -- they don't acknowledge our 'science'. I hope this helps you gain confidence by building up your superficial appearance and thus "Your Game".



Movie Review: In Time



In Time might have been a brainy sci-fi thriller if someone in the studio's budget department had thought to spend a little bit of time consulting an economist. But alas, they didn't.

In a world where people stop physically aging at 25, time is literally money. Everyone is born with glowing green numbers on their skin announcing how much longer they have to live. A cup of coffee is worth three minutes off the end of your life. A thirty minute bus ride docks two hours from your lifespan. A luxury car is several decades. The rich are essentially immortal, while the poor have trouble staying alive from day to day.

And so, somewhere in a ghetto in this world is an orphan named Will Salas, who looks uncannily like Justin Timberlake and finds himself with more time on his clock than he knows what to do with when a rich man commits suicide. Salas is the last person to speak to the dead man, so the authorities pursue him, led by Cillian Murphy in a trench coat. And then the plot somehow

works in passionate romantic entanglements with Sylvia Weis, daughter of the richest man alive.

Of course she gets dragged along on Salas' run from the law, they discover an economic conspiracy, and decide that they must do their part in redistributing the wealth. Interesting how this movie was released during the Occupy Wall Street protests, eh?

Clearly the plot is not the best thing this movie has to offer. What about the premise? Time is money. If you run out of time, you're dead. In fact it's such an awesome premise that every single minute of this movie is deluged with time-related puns. "Can I have a moment of your time?" "Don't waste my time." And so on. I understand that in a world where time is the currency, the inhabitants might actually speak that way, but it's irritating all the same.

Vernacular aside, the premise itself is well-executed for the first half of the movie. After that, an economist or just a little bit of common sense would have come in handy. If a coffee costs three minutes, why does a bus ride cost two hours and a luxury car about half a century? Furthermore, someone in the writing staff seems to think that dumping millions into an economy would only be beneficial. Everyone would live longer, yeah, but

think about the inflation! Too bad characters in the film perceive inflation as part of the grand conspiracy rather than a natural economic process. Anyways, the premise isn't the best part of the movie because it turns around and falls on its own sword halfway through. That was pretty disappointing.

Let's consider the acting next. Justin Timberlake was pretty good as Sean Parker in The Social Network. Here, I learned that he cries like a dying clown. It's not really his fault. The script doesn't give anyone much to work with. Salas' daddy issues are never explored. Cillian Murphy's character hints at a poor upbringing, but that never comes into full light. And all I know about Sylvia Weis is that she knows how to run in six-inch heels and has gratuitous love scenes with Will Salas.

Speaking of the heels, that brings us to the best part about In Time: the wardrobe department. Seriously. Thanks to the premise, everyone is beautiful and perpetually twenty-five years old. And they look great in formal wear, especially when it includes running in those six inch heels.

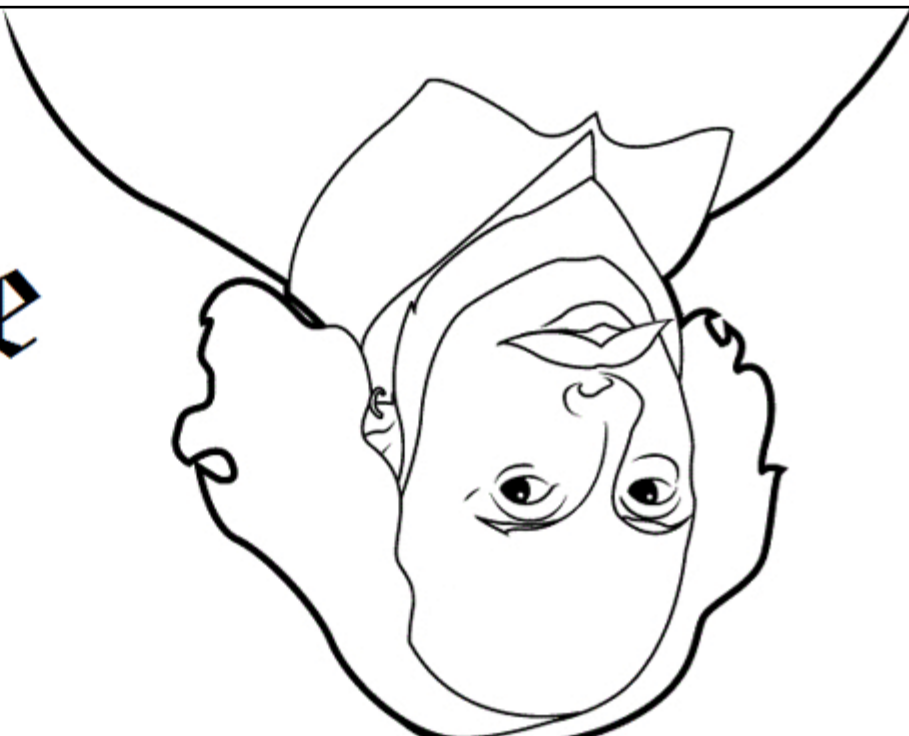
But in the off chance that you're not into watching Justin Timberlake in a suit run from Cillian Murphy in a leather duster, I hope your willingness to suspend disbelief extends

to basic economic principles. If you can bring yourself to turn off that part of your brain for two hours, then In Time becomes a decent thriller built off one of the best premises I have ever seen.



20th Century Fox

I Hate Shakespeare
26th November
2pm - 4pm
7pm - 9pm
AL 113/116
Tickets - \$2
At Door or Office



De Olde Engplay

Backside Illuminated Image Sensors – What are they?



ANGELO ALAIMO
4N ELECTRICAL

What was once thought as impossible, mobile phone cameras are becoming ubiquitous and are seen as the first camera people will use when capturing images “in the moment”. Just like how the megapixel race dominated traditional digital still cameras (DSCs) through the 2000s, the race has now transcended to the world of mobile phones and devices.

For the last decade, phone camera’s pixel count has been increasing steadily. While most smartphones and other cameras on the market today sport 3 or 5 megapixel cameras, some phones on sale in Japan have broken the 16-megapixel barrier. It’s only a matter of time before those image sensors reach the North American shores.

As some may know, having a higher pixel count does not necessarily garner better images. There are enormous trade-offs and physical limitations that camera design engineers deal with on a daily basis to attempt to deliver the best image quality possible to customers. The race to make mobile phones increasingly smaller and thinner, with complicated curvy designs complicates this effort as well.

An image sensor is a physical device with millions of light-sensitive areas which collect photons and convert the intensity of light to an electrical signal, which is then converted to an image. With image sensors increasing in pixel count and cameras getting smaller, these physical photosites are reducing in size at a rapid rate. As photosites get smaller – they collect less photons which result in

a weaker signal on a per pixel basis. The best analogy I can give is one of which there are two buckets of differing radii that are collecting rain drops. In a given time period, the larger bucket will collect more raindrops than the smaller bucket and will then contain more water. In the case of an image sensor, photons are raindrops and pixels are the buckets.

When sensors develop weaker signals from photons, the resulting final imag-

stretch the life of silicon as much as possible, and one of these processes is called, “back-side Illumination” or BSI for short.

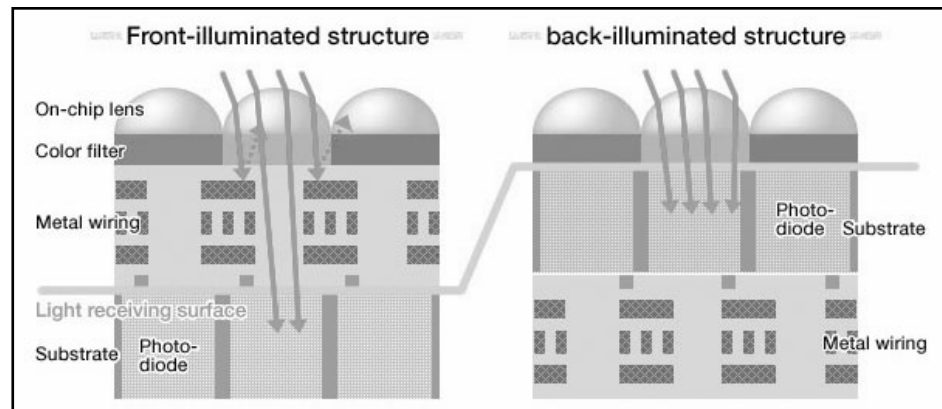
In a typical “front-side illuminated” (FSI) CMOS active pixel sensor, pixels are built on silicon wafers in a multi-layer process semiconductor process. First, the photodiode is developed in the bulk of the silicon wafer – this is the light sensitive component of the pixel which converts photos to an electrical signal. Now, on top

diode. Some light is lost through reflection (also known as optical crosstalk) at the metal layer and never reaches the photodiode for conversion into electron-hole pairs. This reduces a sensor’s overall QE and images final image quality – so what’s the difference with back-side illuminated sensors?

With BSI sensors, the semi-conductor process is mostly the same as a FSI sensor – photodiodes are laid out first, and then the metal layer. After the metal layer is laid out, the silicon wafer is flipped over and the excess bulk silicon is ground down until the wafer is only about a dozen microns thick. Grinding the silicon down allows the wafer to only be as thick as it needs to be – about enough to expose the photodiodes. After grinding, the colour filters are laid out as before with FSI illuminated sensors.

With this process, when light passes through the colour filter, it directly passes through to the photo diode. There is no metal layer for optical crosstalk, thus more photons are available for possible electron-hole pair carrier generation which result in a much higher QE. A BSI imager with a given pixel size will theoretically produce better image quality than a similar sized FSI imager – or at least for now.

Overall, the BSI process has extended the usefulness of small-pixel active pixel sensors, but the time will eventually come when a new technology for image sensors will need to be used. Consumers are number driven. They will always want more pixels in their camera, and device manufacturers take advantage of this knowledge to increase marketability of their products even though it may not be in the best interest for the best image quality in the long run.



The structure of a Front Illuminated Pixel (left) and a Backside Illuminated Pixel (right)

es – particularly low light images - are worse due to poor Signal to Noise ratios (SNR). To limit this loss in quality sensor and camera engineers try to maximize a metric called “Quantum Efficiency” – or commonly know in the industry as QE. In short, QE is the ratio of photons hitting a sensor resulting in an electron-hole pair conversion to the total incident photons. As pixel area reduces, QE decreases as well, which is something, as mentioned, engineers want to maximize. As technology advances encroach on the physical limitations of silicon and light, sensor engineers are scrambling to develop new technology and processes to

of the photodiode, the transistors which make up the pixel are built up on top of the photodiode which are known as the “metal layers”. On top of the metal layers lie colour filters which only let red, green, or blue light pass to the photodiodes. These colour filters are necessary for software to recreate a colour image through an interpolation algorithm called “demosaicing” which converts a matrix of colour-filtered light intensity values to Red, Green, and Blue values at each pixel.

The issue with the FSI structure is that light travels through the colour filters and metal layer before reaching the photo-

Breaking Up on the Internet



BROCKGRAEME SCOTTKOPP
1B JOURNALISM

I'MMMMM BACKKKKK

I know that you were all worried (and a little heart broken) when you didn't see my smiling face on one of the last pages of our bi-weekly publication, but don't worry, I am obviously fine. I was on a TOP-SECRET (shhhh...) mission for the Peruvian government studying spontaneous speleogenesis in the black sea. If you don't know what this is (I'm looking at you B-soccers, or B-footballers if you're from Britain) then you will find detailed information in my previous articles.

But that's enough about me, and on to how you're getting stupider. That's right, there is a 89% chance that while reading this article, the University of Waterloo is making you stupider (this article is obviously offsetting the UW Effect by educating you). Calm down. On the bright (no pun intended) they aren't doing it on purpose (that we can prove at least). BACK TO THE FACTS. How is UW targeting your brain cells you're asking. Well, I'll tell you. WiFi! That's right, all those little boxes on the walls you see around campus are actually brain killing machines. Don't believe me?

Keep reading....

But I digress.

As an avid marine spelaeologist, the economic situation in Europe is very troubling to me (there's lots of good spelaeology to see in Greece). However, in lieu of recent events, it would seem

as though the end of this crisis is well in sight. And when I say recent events, I am speaking of course of Kim Kardashian's divorce to NBA Superstarrrr Kris Humphries. Allow me to explain.

With the current NBA Lockout it was the perfect time for Kim and Kris to marry, Kris had nothing else to do for a few weeks, so what the hell. Unlike most players who decided to take their skills in the sport of Basketball (or Hoop-Shot, if you're British) elsewhere (such as Europe...I'll get back to that). Kris took his talents to a different kind of Hoop (a wedding ring, OBVIOUSLY). Given that his time was so well occupied he had no time for such silly things as Basketball.

This brings us to the present. Kris Humphries, now alone and with no more attention being paid to him (since nobody cares about someone who isn't Kim Kardashian's husband) Kris will look to resume playing Basketball. This will of course bring him to Europe, where basketball is growing strongly.

Along with Kris comes the sweet sweet taste of Kardashian alimony cheques. Using this added income Kris will begin spending all of his money on frivolous purchases in Europe, such as sports cars, luxury smoothies, and gym memberships. This increase in money to the European economy should be sufficient (by my calculations) to get Europe out of this crisis and re-stabilize the global economy.

HOO-RAY!

And with that my friend I bid you, adieu.

Until next time,

Brockgraeme Scottkopp

Got Talent?

**Whether or not,
Come to Taleng**

**Huether Hotel
59 King Street N**

November 23, 8-11PM

The Future of Gaming: Just One More Minute, I'm Almost to the Next Save Point!!



JON MARTIN
OBI JON1138

November seems to be the month for big name triple A games. Batman: Arkham City came out earlier this month (and is currently competing with my study time) and Skyrim just came out on Friday. Just like when the newest Starcraft game comes out I think we will all see an appreciable drop in attendance in classes that has nothing to do with the fact that classes end in just under three weeks.

So before we get into the holiday rush and the bountiful amount of gaming time that December provides - with a bit of time for final exam studying, of course - I figured a talk about video game addiction would be a good topic.

Now I know people are going to point out the fact that I regularly complain about the public perception of gaming as a violent hobby that produces homicidal maniacs. But that is different, because the generalization made there is that all video games of all kinds will cause all consumers to become murderers and murder all other people in the world - Kill all the things! The biggest point that I can make is that there is a much higher percentage of gamers that have played games for years and never committed a crime than there are gamers that do commit crimes. So is it the games? No, it's the people.

But back to the topic, I do acknowledge that addiction can be a very real problem for some gamers, sometimes with dire consequences. I believe I have previously mentioned a couple that spent so much time in an internet cafe playing an MMORPG that they neglected to feed their daughter, who they left at home. After the death of the young child due to starvation, the couple was placed under arrest, and gaming was blamed as the cause. While I personally believe that a person has to have something seriously wrong with them to get so engrossed in a virtual world that they forget THEY HAVE A CHILD AT HOME STARVING, game developers have created the perfect environment for pre-disposed people to develop these dependencies.

Several months ago I read an article about a university professor's autobiography about his video game addiction. Attributing his life-

long depression and mental illness issues to an abusive child-hood, the author described how the world of MMOs - in this case the often publicized World of Warcraft - allowed him to escape his life and become the greatest being in his new environment. Driving up enormous debts and losing his chance at tenure, the man allowed his addiction to almost ruin his life, all while losing out on spending time with his wife and children.

This is an extreme case, but one that is probably extremely common, just not publicized. The author described the continued

One of the trends that lends itself to this type of game development and marketing is the growth of mobile and browser gaming. Games like Angry Birds and Zynga's CityVille and FarmVille have inundated the market and captured the attention of gamers, core and casual alike.

Many more games like Angry Birds have sprung up, using extremely short levels to allow for casual pick-up and play style gaming on the go. This level lends itself very easily to the "just another level" kind of addiction - obviously not the same level of addiction

ally ramping up in difficulty. Interestingly, right before you start level four, a message comes up saying you have a one-time offer to unlock all the levels in the game (for \$5). As this was a free game I passed on the option of paying for a game I wasn't really interested in. And, of course, level four is hard enough that I've tried about ten times and can't get past. Now I'm sure I could go and purchase that unlock code to get past that level, but I really don't want to support a company that markets a game as free just to lure consumers in, then slide the collecting tin under their noses a minute later.

FarmVille and CityVille (which are basically the exact same game) are great examples of an incredibly simple gameplay model that has trapped hundreds of people. While it seems to be fading out now, just a year ago I was getting about five emails per day from Facebook because friends wanted to share some stupid building or crop with me. The games took the basic mechanic of the RollerCoaster Tycoon games and made them a community environment.

Even console and PC games attempt to draw consumers in, with downloadable content and in-game collectibles. The achievements and trophies in Xbox 360 and PS3 games respectively are big examples of this process. Some people are so obsessed with having a higher gamer score than others that they will willingly buy horrible pointless children's games just because they can get the thousand points for all the easy achievements. If spending \$50 on a stupid game you don't actually want because you want your virtual score to be higher than some unknown person from the other side of the planet isn't an addiction, then I don't know what is. Luckily the days of limited save points in games is gone except where the developers just want to be evil. Remember the days when you had finally beaten that horrible boss fight, only to fall off a platform or get caught on an invisible wall. Those are the times when the ability to save a game anywhere at any time is the greatest advancement in gaming in years. Though it does remove the classic excuse "But I haven't reached the next save point yet, just five more minutes Mom", well, you win some, you lose some. So, don't get to caught up in gaming to forget what really matters. See you next time.

Keep on Gaming!



draw he feels every time a new WOW game is released, even describing the occasional relapse he has had, and how the continued support of his family helps him pull through.

This extreme case is probably not something that the vast majority of games would ever really consider a problem or would experience themselves, but game developers have been able to market on human nature to make many more addictive games to sell to the general gaming consumer.

as some games. But I have seen some people get extremely angry when they can't beat a specific level of Angry Birds. It hasn't been pretty, and I'm sure the bus driver didn't like them throwing their phone at the window.

Recently I installed a 'free' game known as Wind-up Knight for Android. The game looks great, with 3D environments and simple but addictive gaming. The first couple levels were basic tutorial types, introducing you to the main game mechanics, with each gradu-

Big things with Will Zochodne: Gerald R. Ford Class Aircraft Carrier



WILL ZOCHODNE
4A MECHANICAL

What happens when you spend 14 billion dollars on a boat? You get some pretty sweet features like:

- 1100 feet long by 134 feet wide
- Two nuclear FREAKIN reactors
- Electromagnetic airplane catapult
- A bunch of missiles and stuff
- Estimated 200 million pound displacement with top speed of 56 km/h

I don't even know where to start with this one guys. This might be the most overkill weapon system ever built. But that's ok because 1) it's awesome and 2) it's not built yet. Construction started in 2005 and is scheduled to be completed in 2015. The Gerald R. Ford will actually be significantly bigger than the Nimitz class aircraft carrier (shown in picture) that it is replacing. The United States already has more carriers than the combined

countries of the world - so why not build 10 more just to be more badass.

Despite the insane size of a carrier, its planes need a catapult to achieve takeoff speed in the short distance available. Ever gone from 0-264 km/h in 2.1 seconds? The Gerald Ford can launch four 45,000 pound planes at the same time. Just cause.

For pilots though, landing is the most difficult part of carrier operations. Picture this, you are travelling at 67 meters per second, and your runway is 150 meters long. Your wingspan is 40 feet and your landing area is 60 feet wide. To the left the pitch black ocean, to the right a row of fully fuelled and armed planes. Now imagine the runway buckling and heaving through 50 foot waves. Its night and rain has reduced visibility to a few hundred feet. Pilots are expected to be able to smash their jets onto the surface of the deck and snag one of four massive arresting wires in any condition.

The arresting wire can absorb an absolute colossal amount of energy. It can stop a 54,000 lb plane travelling at 240 km/h in

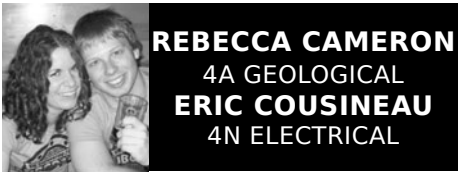
about 2.5 seconds. Even then, these cables are known to break on occasion. The foot long diameter steel wire whips across the deck often injuring scores of crewmen and the pilots of the landing aircraft have mere seconds to eject before the plane pitches off the deck of

the ship.

I think I've done enough convincing. Let's give it a couple years and all pool in to get a used one. I'll be supreme admiral and chief squadron commander. Big things rock!



Beer Buzz: Beer and Food Pairings and a Flash of Green



REBECCA CAMERON
4A GEOLOGICAL
ERIC COUSINEAU
4N ELECTRICAL

Hello readers! This week your taste buds are in for a treat - we will be going over how to pair food with beer and reviewing the delicious Green Flash Imperial India Pale Ale.

Pairing food with beer is a relatively new concept, but beer sommeliers are now very common in large cities, and are referred to as cicerones. A cicerone or sommelier is someone who specializes in matching beer or wine with food. Something that very few people know is that beer is much more versatile to pair with food than wine. This is because of the huge variety of ingredients that can be used in beer. Wine has two ingredients - grapes and using wood barrel-aging to change the flavour of the wine. Beer on the other hand has barley, hops, water, yeast, spices, fruits, vegetables, nuts, chocolate, and more!

Beer and food pairings can be done in two ways: By pairing complementary flavours or by pairing contrasting flavours. One example of pairing complementary flavours would be putting a fruit dish with a fruit flavoured beer. The idea is that one flavour will echo the other. An example of pairing contrasting

flavours would be pairing a sweet wheat beer with a spicy dish. The idea behind this method is that flavours will balance each other out (in the example above the sweet flavour would balance out the spiciness).

Beer pairings are similar to wine pairings in that a lager is like a white wine and a flavoured ale is like a red wine. Ales are full-bodied and fruity, whereas lagers are refreshing and delicate in flavour. Also, hoppy beers work similar to acids in wine - they cut through many different flavours associated with meat. Finally, just like wine, beer comes with varying levels of body (density): Light, and heavy. Normally you put light dishes with light beers and heavy dishes with heavy beer. An example of this would be pairing a lager (light beer) with fish, and pairing a lamb stew with a stout (heavy beer).

Another thing you need to be aware of when pairing food and beer is the texture of a beer - a beer with more carbonation (bubbles) goes best with richer food - bubbles will cleanse your palate and enhance flavour. Additionally, if you are going to have multiple beers during a meal, it is vital to start with light beers and work your way up to darker beers - a darker beer will be so flavourful that you may miss a lot of flavour from more delicate beers you try later on.

The above tips will lend a helping hand if you want to give beer pairing a try. Don't

be afraid to try unusual combinations - beer pairing is about exploring the world of flavour and finding what you enjoy! Now onto the flashy green beer :)

Eric has been out in BC for 2 full months now so we thought we'd review one of his new favorite beers from out there. He is a lover of hoppy beer so naturally his favorite style is an IPA (India Pale Ale). While out in BC he discovered a beer called Imperial IPA by the Green Flash Brewery of San Diego,



Photo credit: beerblotter.wordpress.com

California. In order to describe the hoppy-ness of a beer the quantitative measure of IBUs (International Bitterness Units) is used. The IBU rating of a beer is determined using a device called a spectrophotometer. A light lager without much bitterness might have 5 IBUs, while an IPA can have 100 or more. The Green Flash Imperial IPA has 101 IBUs, and 9.4% alcohol by volume.

Eric had this beer on tap at St. Augustines and at The Alibi Room in Vancouver. The beer poured a cloudy gold colour, with clean white head. Head retention was very good, starting with 2 inches of head and settling down to a thin layer that stayed the whole time. The aroma of the beer is a mix of grapefruit, pine, and hops. Despite its high alcohol content, the taste of the beer is marvelously balanced with the main flavours being intense hops, grapefruit, and a hint of alcohol. Overall, this beer is amazingly delicious if you enjoy intensely flavoured beer, and I would definitely recommend it to anyone looking to spice up their beer repertoire and try something new and exciting. Eric will be attempting to bring as much of this home with him as he can!

Well that's another article everyone, I hope you enjoyed reading it and learned something new about beer. As always we encourage you to get out there, try something new, and FEAR NO BEER!

Topz (With a Z): Top Ways to be Hilarious



WADE WILSON & EDWARD BLAKE
2Z HANDSOMENESS

Yo dogs, we heard you like comedy so we wrote comedy about comedy so you could laugh while you laugh. Anyone - even you - can be the next great comedian, partaking in a rich history from Pagliacci to Dane Cook. However, there are certain advanced methods to the trade that allow for you to be funnier than a man wearing woman's clothing. Well, without any further dilly-dallying, let's get right into it!

Wordplay: Wordplay has been called the lowest form of humour, but it is these writers opinion that such elitism is to be pun-ished. Puns are a great way to show off your cleverness; after all, being able to think of words that sound similar is no easy feat! And let's not forget that this great tradition dates as far back as Billy (take that, establishment!) Shakespeare, and the Bard was known for little else (after the failure of his luchador wrestling career as the Merchant of Menace).

Enthusiasm: THIS ONE IS PRETTY ESSENTIAL! JUST LIKE MUSIC, JOKES ARE BETTER WHEN LOUDER! ALSO, IF YOU CAN, MAKE SURE TO MOVE AROUND A LOT AND USE FUNNY

VOICES. IT DOESN'T MATTER WHAT YOU SAY, IT'S HOW YOU LOOK WHEN YOU SAY IT. FACT: HANDSOME PEOPLE ARE FUNNIER. SO BEFORE YOU TELL YOUR JOKE, SPEND A LOT OF TIME DOING YOUR HAIR TO LOOK MESSY TO FIT YOUR PERSONA. BECAUSE THEN, PEOPLE WILL HEAR YOUR JOKE AND BE ALL LIKE "AHA-HAHA!" AND IF YOU'RE ALL LIKE "AHAHAHAHA!" FIRST, THEY'LL BE INDUCED TO LAUGH TOO! It's that easy!

Memes: Some people might be inclined to think of memes as a new phenomenon brought on by the age of the internets, that they were just poofed into existence by some selfish genie. Some of you might be asking "What you talking 'bout, Willis?", but even before the age of the tubes, brilliant minds were saying things that people around them had said before to make things funnier. But, fortunately for us, the bountiful bevy at our disposable is larger than ever before. Want to complain about a professor? Even the most generic and tired of cliches becomes sensational if written over a picture of Engineering Professor! Don't even think of telling a story online unless it's in the form of Rage Comics. And best of all, the medium founded on its simplicity and personal touch has been improved to be a system of images you paste into comic panels, like those

games from grade school!!! 1 one!! Meme's are like an inside joke, that millions of people are "inside" on, which makes them even better! Our kindergarten teachers have never steered us wrong.

Sex and Cussing: Now this one is for the daring among you. Naughty-no-no words are forbidden and their mere utterance are in-dick-itive of a man or woman who is willing to be edgy. This phenomenon is perhaps best explained by Mr. Patrick Star who describes them as "sentence enhancers" which can be thrown into sentences to make them fancier. Sexual vernacular and innuendo are even more effective, as they allude to a mystic practice that only an elite sect of humans have partaken in over the course of civilization, something so amazing that unfunny proles or lesser species couldn't dream of understanding. So, if you're up to the formidable challenge, try to find sexual meaning in ordinary sentences. The path to mastering it is hard, long and dark, but if you can handle this load, we recommend you take it.

References/Allusions: Being able to relate something to something else is nothing short of brilliance. There are two types of successful allusions: those that are ubiquitous and those that are esoteric. The former is easy, as you simply have to bring up something that is in the popular media. People are placated by the mention of the song they heard recently or the joke that someone famous

made and then you get to glow in your excellence. Esoteric references are even easier. They don't even have to be much thought-out as the joke is really just a vehicle by which to stroke yours and the listener's egos with a congratulations on being so learned on a tidbit of trivial minutia. Your joke can be greeted by a rousing rendition of John Cage's 4'33", but if even one person catches the reference, you're golden. Also, if ever accused of plagiarism, you can just say that it's a reference, parody or homage. For example, who can forget Watson and Crick's knee-slapping parody of Rosalind Franklin?

Plagiarize: This section has been removed in accordance with UW policy 71.

Going Meta: For the learned wit, jokes are never tired, lazy or lame; they're intentional, ironic and meta! Meta-humour is anything but easy; it requires a keen ability to believe you're better than other people and daringly clever. And if you're even more self-indulgently awesome, try meta-meta humour to be the cleverest maiden in all the land!

So, friends, now you're ready to joke with the big boys, and maybe one day you can compose the next great comedic concerto, and have your work stand among such giants as Big Bang Theory or Two and Half Men. We're confident that you'll be able to be even funnier than when a straight man is confused for a gay man.

THE IRON SUDOKU

EASY

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MEDIUM

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

HARD

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

Point Vs. Counterpoint

Homework or Procrastination

COUNTERPOINT

ANISH BHUTANI
4N CHEMICAL

Since the dawn of time, engineering students (and all students, really) have faced a serious dilemma of epic proportions: Do I start my homework now, or do it later? Sadly, many youths are choosing to take the route of not doing their homework now, and instead are procrastinating (or performing other actions with the prefix "procrast-"). It makes life in the moment simpler, and your time can be spent improving your social life on websites such as Facebook, Twitter, Reddit, Quickme-me, etc. But really, is it worth procrastinating, when really, you can just do your homework instead. My opponent in the opposite column might say "yes", but I am here to tell you "no"!

Choosing to do your homework before procrastinating is always the best option. For one, when you finish the homework you have to do earlier than the deadline, then the time leftover can be spent exploring awesome websites, like the ones mentioned above. Not into websites? It also allows you to do other fun things, like hanging out and drinking beverages with friends, or having time to build on the relationships around you.

On the other hand, if you chose to do all of those fun things first, you leave less time to get homework done. It is very easy to underestimate the amount of time it will take to do an assignment, and procrastinating may lead to late nights, and an increase in your stress levels, which is bad. Many studies and papers in well known health and science journals show an inverse relationship between stress and health. This relates to both physical health of not eating and sleeping right, and your mental health, allowing you to function properly.

Doing your homework on time will also increase your likelihood of doing well in the term. If you get your homework done early, you have the time to double check answers with fellow students, ask TAs questions about problems you have, and find out from professors to make sure that they are absolutely right. It will also make sure that you get the assignment done. We all know that 3am calculus assignments are non-sensicle, and it becomes the challenge of how many part marks you can get, not about actually learning the topic. For me, once 4am hits, I usually quit too, and just choose not to hand in anything for the assignment. Finishing your homework early will also keep you prepared for midterms, quizzes, and final exams because, unlike those who procrastinate, you will actually understand a lot of the material when you work through the problems, yourself.

Speaking of actually learning the topic, isn't that why most of us are here in the first place (if not, you can skip ahead to the next paragraph). As an engineering student, you are paying anywhere between \$6000-\$25000 per term for an education. If you constantly procrastinating and not do your homework, you are not going to learn anything. For one, the designs you make as an engineer can affect millions of people, meaning you have the potential to kill or ruin the lives of millions. As well, if you kept reading this paragraph, it means you are not here for the \$40,000-\$200,000 piece of paper to get a job, but instead, are hoping to learn something so you can make a difference.

But I digress, doing your homework on time makes sure that you stay on a role in a positive way. If you procrastinate, you are left with living one day (or night) at a time, trying to complete the next assignment that is due. By the time the term ends, you will have learned nothing, and when the exam period

begins, you will be spending all your time starting to learn the material. For those of you who haven't realized, ass your exams, which when compared to homework, will actually make you pass or fail the term. On the contrary, when you do your homework on time, you can take your time to move onto the next assignment. You will on a role to get work done. Once the term finishes, that role of staying on top of everything will continue into finals. No longer will you have to spend a day trying to learn everything the night before. You will be motivated to stay on top of everything, and do well.

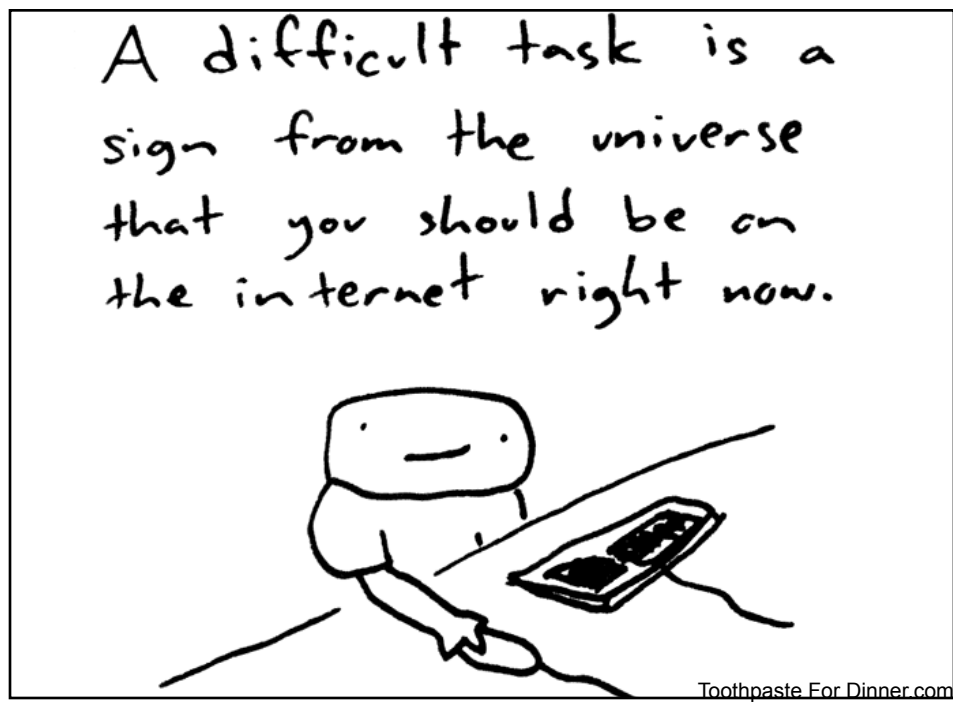


<http://nwbingham.com/2011/06/yeah-im-gonna-get-stuff-done-today/>

The last reason (and most important, in my opinion) is that doing your homework WILL IMPROVE YOUR RELATIONSHIPAL (SEX) LIFE!!!! Think about it. Charles Darwin had talked about sexual selection driving evolution in a species. The Peacock has beautiful feathers, giraffes have long necks, and elk have giant horns. In engineering classroom, its the brain (or apparent intelligence) of the male or female that is sexually selected for.

Whether you are a girl or a guy, there is nothing sexier than someone who can take control of their lives and knows where they are going. And nothing says "I have control of my life" like having your assignments done early. On top of that, if you have that special crush in your class that you want to spend more time with, finish your assignments early. Then, when that special person you like starts his/her assignment, you can spend some quality time helping them finish the assignment, and then they can spend their time saved spending quality time with you (if you know what I mean).

So while my opponent on the opposite column may tell you that procrastination is the best option, in all reality, doing your homework is better. It will allow you to learn more, keep you healthy, and if you do it enough, can increase the time you spend with that significant other.



KEVIN VELOSO
4N SOFTWARE

Unlike most students, I'm not procrastinating from any homework since I'm not doing much this term. See that capital "N" next to my year number? That means I'm off-stream from the B-Soccers. I suppose I've gone meta and procrastinated on the reason why you should procrastinate. I'll get to that point. Eventually. Actually, what's going on in my mind right now? Just to get a sense of what a procrastinator's mind is actually thinking. I'm trying to come up with an image or two that will go with this PCP, possi-



bly a webcomic or a custom image. Or a screenshot of the current top stories on Reddit. I really should get to the main point. Or surf on Reddit for several more minutes to find that quintessential image. Ooh, that's a fun word! "Quintessential". I could probably find more words that sounds really long that tingles the ear like the fur of a new fluffy hat. But anyway, I'm rambling. Time to actually start my counterpoint!

You should procrastinate because you need a break! I mean, c'mon! Being in class for 6 hours, or possibly even more per weekday? That can bring a strain to any student's brain! Not to mention all those assignments and labs that are due. You need to step away from the books, the course notes and formula sheets and check out what's really outside the classroom. Yes, OUTSIDE. For those who don't know what that is, or have no idea what this "outside" concept is, the Internet is also an option to explore when stepping away from the items above. It's full of fun and free content, such as kittens, rage faces, comics, and possibly the latest celebrity gossip that nobody really cares about. I heard something this week about Justin Bieber having some sort of relations with a 20 year-old woman, but I thought that he was with Selena Gomez or something. What I find extremely peculiar is how much fame Justin Bieber has, and he's younger than the majority of students on campus. Procrastinating again on the article,

sorry! If you're not convinced why you should procrastinate and why you should think about random stuff that might not really matter in life, continue on to my next point!

You should procrastinate because everybody (well, mostly everybody) is doing it! According to the Procrastination article on Wikipedia, about 80-95% of students engage in procrastination. If you know that most of your class is chugging along well this term, at least you know that according to this statistic (which will most likely change since I've told everyone about it, and this Wikipedia article isn't locked) they've been procrastinating on their work for a good chunk of the term. If most of your class isn't doing too well this term, realize that the bell curve will save you. Also realize that even if your class is doing well this term, they're still part of that 80-95% statistic and probably have avoided some or all of their work this term. In fact, in trying to make such a factual statement plausible, I might've procrastinated on writing this article and modified that Wikipedia article, just so I have something to write about!

I had as much fun writing this article as you had drooling over your last bit of calculus homework because you were up all night procrastinating, because I'm sure I've convinced you to procrastinate by now, and that you've procrastinated in reading the rest of this piece. Just in case you didn't, I have one last point! You should procrastinate because it makes everything look a million times more appealing! For those who have done WatPD (or even PDEng if you're old like me) you probably have procrastinated at least once or twice before doing that online assignment. Haven't you ever noticed how interesting the items in your Facebook/Twitter feed become just before doing an assignment? It's amazing and it's fantastic! For some reason, you suddenly have the urge to join your friends and generate a list of words from your Facebook status and share it to everyone, or read the article on the 5 most ridiculous myths that you probably believe but know aren't true (yes, I got that from Cracked). After finishing your assignment for the night, try going back on the Internet again. Check out the latest on Facebook, or the new top stories on Reddit. Notice how they're not as appealing anymore? The power of procrastination right there, just to make your life better!

Now, how do you take advantage of such a power? Good ol' Time Management! If you figure that you have 5 hours tonight to finish up your two assignments, assuming that they only take about 2 hours each, you can probably procrastinate for an hour. Realistically, you know that assignments could take longer than 2 hours, and more realistically, you don't have 5 hours to spare and will probably procrastinate for about 5 hours anyway, but you know that if you procrastinate now, that's the only chance that today's top posts on Reddit would seem the most interesting. I also don't think you want to be left out on the latest meme to hit the Internet, would you?

Sure, you're here at the University of Waterloo for the sake of academics and getting good marks (or passing) and would probably have to hand in SOMETHING in order to get what resembles a passing grade on Quest. You also know that final exams are coming up, and that I really shouldn't have written such a poorly convincing article at this time. However, I still urge you to procrastinate! Give yourself a break and do something that isn't homework! Come up with random words as I have in this article and make those your new Facebook status! See what kind of responses you get. There are tons of things you can do to make your life more interesting! Might as well get moving and procrastinate!

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Lest We Forget

STUART LINLEY
2T NANOTECHNOLOGY

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www.CrosswordWeaver.com

- 40 November 11th ended this
42 Homely
43 Tidied
45 Buck partners
46 Greek 'H'
47 Rough file
48 Sum
49 Energy unit
53 Cadillac sedan
54 Cola, ex.
55 Also
57 and 17-Across: Start of a poem (Words overlap)
65 Repeated twice: an agreement
66 David offering
67 Norwegian capital
68 Harvard rival
69 Explains
70 Sinless place
- DOWN
- 1 Tire val.
2 Went on the lam
3 Without power
4 Sandwich dealer
5 Columbus birthplace
6 Cool like pi
7 Supped
8 Like some Porsches
9 Church areas
10 Electron quantity
11 Knot
12 Every
13 With 58-Down, Rooibos
18 Leather tool
19 Duty
22 Circle segment
23 Sushi, ex.
24 Put in danger
26 Masticate
27 Lake Ontario city
28 Registry

ACROSS

- 1 Jab
5 Persona non ____
10 Play the lead (in)
14 Not out
15 Adore
16 Support post

- 17 and 57-Across: Start of a poem (Words overlap)
20 ____ Jima
21 Has go with
22 Cleopatra killer
25 Milk disaccharide
28 Last in list indicator

DOWN

- 31 Atoll
33 Santa syllables
34 With 'man', a brewing company
35 Drunken partygoer
38 Tarzan

Everyone Is Craig



- 29 Proximal
30 Lion hideout
32 Time locales
34 TMNT hangout
36 Ship abbr.
37 A messy room, perhaps
38 In the style of
39 San Francisco time
41 Posterior
42 U.S. consumer watchdog
44 RTS attack stat.
46 Pass
49 Bobby
50 Have children, like Angelina
51 RPG pickups
52 Dawn goddess
54 Dry
56 Orchestral reed
57 Introverted
58 With 13-Down, Rooibos
59 2001 computer
60 Buddy
61 Ails
62 Acid
63 Plaza del Toros cry
64 Prevailed

THE IRON INQUISITION
Jon Martin, 3B Civil

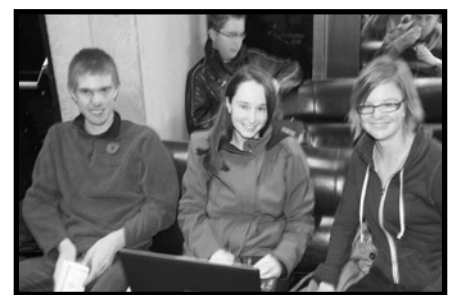
"What was your favourite 90's cartoon?"



Animaniacs
Noah Hogan, 3B Mechanical



Roadrunner and Wilely Coyote
Mina Labib, 3B Nano



Magic School Bus
Suzy Patchett, Teresa Lumini,
Jeremy Vanderburg, 1A Nano



Arthur
Catheryn Ryan, 1A Civil



Beevus & Butthead
Melissa Ferguson, 1A Chemical



Bobby's World
Andrew Polischuk, 2A Mechanical