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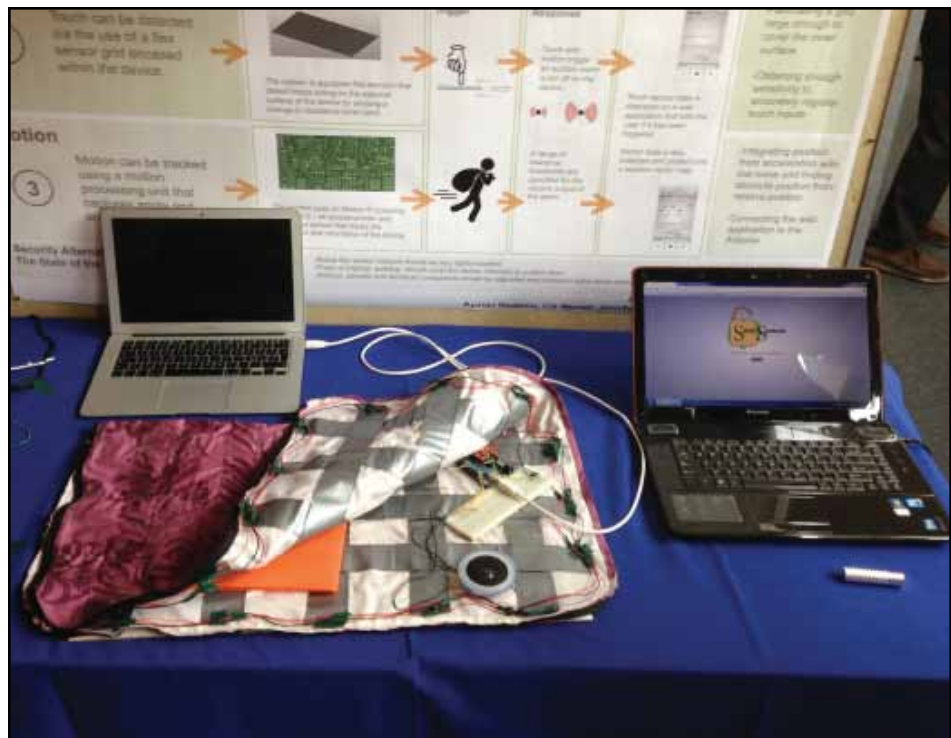
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The Season of Symposia



Waterloo Engineering

The week of March 18 to 22 was busy for fourth year students as they showed off their culminating design projects. Departments in attendance included Mechanical & Mechatronics, Electrical & Computer, Nanotechnology, Management, and Software.

KRISHNA IYER 3T NANOTECHNOLOGY

The third week of March at the University has traditionally marked the occurrence of symposia for Waterloo Engineering. These symposia are a showcase of outcomes from capstone projects that engineering undergraduate students take in accordance with the CEAB to exhibit the understanding of engineering principles over the nearly five years of education. This year too, the exhibits were extremely impressive and definitely exhibited the prowess of Waterloo engineering students to make a project that could make a difference in this world.

On Friday, March 15 this year, the final year students graduating from the Systems Design Engineering showed off their capstone projects. As always, they were truly amazing, from object collectors for application in extraterrestrial rovers to autonomous

quadcopters that recognized persons in danger and enabled fast response. Furthermore, there was a variety of third year projects being showcased. These projects also packed some serious punch with a plethora of innovative projects. The winning team for the fourth year design project under the "Peoples' Choice Award" had developed a custom furniture solution. The best fourth year design project award was split between a smart door project and the autonomous tracking of objects by a quadcopter. A beekeeper effort enhancement system was the recipient of the Best Entrepreneurial Potential Award.

On Monday, the Mechanical and Mechatronics Engineering students showed off their projects. They too were quite impressive and were of a caliber well above a student project. There were a variety of novel ideas including a 3D printer that printed items from chocolate. There were also designs for a single-player air hockey table where a computer

controlled the position of one of the pucks. The winner of the fourth year design project competition for the MME department was a machine that allowed users to deposit silver and other possible conductors to allow for rapid prototyping of electronic components.

On Wednesday, students from the Electronics and Computer Engineering showed off their technical abilities in their own symposium. There were programmable guitar pedals, key-less entry solutions for doors and several other innovative solutions. There were robots that saw what a person did and copied those motions. There were also remote data acquisition boxes. The winners of this symposium was a power monitoring system.

The Friday marked the Management, Software and Nanotechnology Design Symposium. The Nanotechnology Engineering projects truly wowed audiences with innovative projects. There were frost-repellent coatings,

anti-microbial coatings, reinforced composite fabrics and flexible electronic sensors for glucose. The winner of the nanotechnology symposium was a flexible smart glass display for advertising applications. Despite being only the second batch of management engineers to graduate, management engineering students came up a variety of great projects. These projects ranged from solutions to improve efficiency of hydroelectric power generation to a system that studied TV analytics in the modern age of streaming and online viewership. The winners for this symposium are yet to be announced at the time of writing. Software Engineering students also exhibited some fine projects. These projects targeted consumers such as piano students. There was also an interesting project that enabled one to place an order for pickup prior to getting to a destination thus avoiding lines. Information for the winners for not accessible for this symposium.

Letter From the Editor

Five Years in the Making



ANDREW FISHER
EDITOR-IN-CHIEF

Hello avid reader! Here in front of you is Issue 5 of The Iron Warrior - the last issue for the Winter 2013 term. Hidden among these fine pages of dead tree skin, you will be able to find The Tin Solider. This component of the paper boasts many satirical, humorous, and outlandish articles which will make even your dullest day a little more entertaining. Alongside The Tin Soldier, we have provided you with the regular columns you have come to enjoy this term.

My favourite article of the issue goes to Erin Matheson for "Infrastructure Isn't Sexy: Why Campus WiFi Will Always Suck." This article provides good insight as to why our society is consistently hindered in progress due to aging infrastructure. Runner up of the issue goes to Kevin Veloso for "The Graduating Warrior: Done Is Better Than Perfect." This issue has to be the most painful issue I have put together, but overall, I think it turned out pretty good for your visual consumption!

Now that we have reached the last issue of the term, it is time to reflect on my experience as Editor-in-Chief of The Iron Warrior. Coming into this role I had very high ambitions. My main goals were to get new people writing for the paper; have the draft paper ready by Sunday at noon; get paper racks installed in E5, E6 and the QNC; and bring in a decently-sized account surplus for the term. I can honestly tell you that only the latter was accomplished this term. I was completely naive coming into this position about the amount of work required to make this paper happen and as a result my ambitions were thwarted. Even still, I was able to bring in a surplus from advertisements and, as a result, we will be looking at purchasing new computers to help improve the production weekend process. Otherwise, I pretty well kept the same people involved in the paper, finished the drafts Monday morning at 6:00 AM (if not later) every issue, and never got the racks put up. Although this is only a 25% success rate, if you multiply that by the amount of awesome my staff team contributed (which was 400%) then I think we were pretty well off with a 100% success!

There were some new columns that were introduced this term which I would like to highlight. The first is Modernist Mixology by Luke Van Oort and Dave Parth. With a beer column in place, it was only a matter of time until a mixed drink column was introduced. I felt this column fit the bill quite well as the drinks in the articles were actually original concoctions by the authors. Pretty cool, eh!? New to this term was also Mom-maknowsbest by the trio of Krisitna Lee, Megan McNeil and Catherine Declaro.

This column did a great job filling in the gap of fashion and general life skills in a very humorous way. I hope to see this column continue in future terms!

This term had a lot of shining stars when it came to the staff who helped put this paper together. The Editor's Awards were given to Kevin Veloso and Nancy Hui. These awards recognize staff members who went above and beyond their required duties. Nancy took on many extra articles when asked, consistently copy edited even the wordiest of articles, and even was able to topple Stuart Linley's reign as crossword contributor. Kevin also took on many extra articles, and stayed extra late into the wee hours of the morning to help finish the layout of the paper.

Other honorable mentions go to Farzi Yusufali who I made write the Point vs. Counterpoint articles for every issue. At one point she even wrote both sides of the arguments! There is a nice article playing off of this in The Tin Soldier this issue. I would also like to thank Jacob Terry for his much needed guidance throughout this ordeal. He was the one who got me into this position in the first place and he definitely was there the entire time to ensure I didn't royally screw up the paper. Despite his constant ramblings and words of support which include "I'll be late, my landlord is raging at us about his personal life...", "One time I spent a couple hours on their website because it was so bizarre...", and "I just finished working on the ESSCO stuff so I'm all yours now"; he was a huge asset to have around and I definitely would not have been able to pull this term off without him.

I'd like to take the time to thank the rest of my staff. You were all rockstars! Thanks to Natasha Phidd for your help with layout at the start of the term. To all the copy editors, I appreciate your dedication, especially when editing my last minute editorials (this one was no exception). Thank you to Jessica Keung and Kyla Rodgers for providing the comics for the paper this term, and to Yola Harsono who took on the role of photo editor and Iron Inquisition-er. Thank you, Kevin Liang, for your help with advertising, especially for securing the full page colour ad from Queens University!

Mary Bland, the EngSoc Business Manager, did a great job helping me with the ins and outs of the paper's finances. Her words of wisdom were highly appreciated! Thanks for the great term, Mary!

At The Iron Warrior, we also give out the Iron Pen Award which recognizes the person who wrote the most number of words for the paper. This term had a very strong battle between three people: Jon Martin, Jacob Terry, and Kevin Veloso. Each posted over 10,000 words written for the paper which is over five full pages of solid text! In the end however, it was Jon Martin who prevailed with a total 12 967 words! Close behind was Jacob with 11 496 words and

then Kevin with 10 416 words. To put this into perspective, their contributions alone made up 23% of all words written this term! For those who can't do that math, this term's paper presented 151 120 words through a total of 227 articles on 116 pages. Be sure to take a look at the masthead on the right of this page to see the great people who helped make this happen!

Now that I have been able to reflect on the past, its time to see where the paper is headed for the future. At this time, I would like to take the opportunity to announce that the next Editor-in-Chief for the Fall 2013 term will be... Alex Lee! Alex is currently in 1B Nano and will be going into 2A in the fall. He has helped me out with layout during a few of the production weekends, helped with the paper distribution, and attended all of the general staff meetings. To some, he is considered the next Roy Lee (EIC of Fall 2010) due to the last name, Asian background, and being a Nano; but lets not jump to conclusions quite yet. WAIT! That's right, I said he is in Nano. For some reason, I have allowed the Nano legacy within the paper to remain alive. Either way, I have full confidence that Alex will do a fantastic job bringing you the wondrous paper know as The Iron Warrior.

By the end of this term, The Iron Warrior will also be moving locations! Our office will be moved from its current location to just down the E2 hall to room 2347. The new location provides us more space, is brightly lit, doesn't feel like a dungeon and is carpet free! Our old office space will be utilized by the Civil and Environmental Engineering Department. Be sure to stop by the office next term to take a look at the new digs!

Overall, this paper has been a phenomenal experience. I have become a master of InDesign, can write more than 1000 words in one sitting, have improved my speed reading, and developed some great friendships.

To wrap up this editorial, I want to put aside The Iron Warrior, and say a big thank you to the Engineering body as a whole. As an upcoming graduate this year, I am very thankful and privileged to have been a part of the culture within Waterloo Engineering. It has been a great five years with many laughs, stories, and adventures. I am very sad to leave this all behind, but at the same time, am excited to see what new experiences lie ahead. To all of those graduates this year, I hope to see you out in the field, passing by on the city streets, or at the local bar swigging back a cold brew. I would wish you all good luck, but as Larry Smith best said, "I won't wish you luck, you only do that for idiots - they have nothing else going for them - I wish you success." To my comrades in the class of 2013, let the world know you have arrived, and let all the success be yours!

THE IRON WARRIOR

The Newspaper of the University of Waterloo Engineering Society

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WISE National Conference Imagines, Innovates, and Inspires



ALISON LEE
3T NANOTECHNOLOGY

On March 16 and 17, the first Women in Science and Engineering (WISE) National Conference was held in Toronto. The event was a year in the making by U of T's long-established WISE chapter. There were over 100 delegates from engineering, science, and commerce backgrounds, both graduates and undergraduates, and a good showing of males too. Instead of focusing on gender issues, the conference aimed to prepare anyone with an interest in science, engineering, business, and technology for a successful career as a leader and an innovator. There were almost 10 delegates from Waterloo, many from engineering. Dean Sullivan generously provided a subsidy for UW attendees, and the caliber of keynote speakers and networking opportunities certainly made it worthwhile.

The event was opened by U of T's dean of engineering Yu-Ling Cheng, who said that the attention at this conference made her feel like a "rock star". She spoke to the need for greater diversity in the STEM (Science, Technology, Engineering, Math) disciplines, which extends beyond gender to culture, up-

bringing, and more. The opening keynote on innovation and leadership was delivered by Isle Treurnicht, the CEO of the MaRS Discovery District in Toronto. MaRS is a hub for healthcare research and technology and houses many start-ups. Ilse shared some surprising facts: the average age someone starts a business in the US is 39, and that Ontario funds many medical device companies, but those devices never end up in Ontario markets. She pointed to social innovation, long-term planning, and radical new thinkers with leadership skills as the key advantages that would allow Canada to compete against other countries with vastly larger populations and markets. She answered a lot of questions from Waterloo students regarding entrepreneurship and how (and where) to thrive as a young person in the business-tech world.

The afternoon keynotes were delivered by Catherine Lacavera, Director of Litigation at Google, and Brice Scheschuk, Co-founder, Director, and CFO of Globalive Communications/WIND Mobile. Catherine spoke about her unconventional-yet-intentional career path from computer engineering to IT law, and then described some of the major cases of copyright litigation between big companies like Google, YouTube, Apple, Microsoft, and Oracle. She en-

couraged delegates to follow their gut, study what they love, and seek advice when faced with tough career decisions. Brice has a background in commerce and spoke about the venture capitalist side of tech entrepreneurship. He shared what a company needs to attract investors and gave examples of smart business practice, such as when to pivot and how to adapt to rapid technology changes.

Day 1 kept on giving with a choice of workshop sessions on women and leadership, productive work environments (given by UW Eng grad Amar Varma, Co-founder of Xtreme Labs), oral presentation, life as a consultant, and work-life balance. The final keynote of the day was given by Ted Maulucci, CIO of Tridel Group, who was then followed by a panel discussion on the future of energy. The evening ended with a networking session, but many delegates were busy preparing for the case competition the following morning.

After a long night, multi-disciplinary teams of four competed in a tech case competition about delivering aid during an environmental crisis in the Honduras. It was great to see what diverse teams came up with and how to propose a solution as a mock consulting firm. For instance, my team had expertise on nanotechnology and electrical engineer-

ing, management science, and computer science (although we didn't win...). Day 2 also featured 3 more keynote speakers. Akela Peoples, President and CEO of The Learning Partnership, and Marci Segal, creativity expert delivered energizing speeches about leadership and innovation. Laura Fromusa, former CEO of Hydro One, spoke more frankly about the need for more women on the technical side of the energy sector. There were also expert panels on personalized healthcare and the digital healthcare age. Finally, Nadine Miller of the Ontario Society of Professional Engineers closed the conference encouraging all aspiring engineers to do as the conference theme suggests and imagine, innovate, and inspire (and get your P.Eng.).

For a first-ever national conference, U of T's WISE team certainly packed it full of great topics emerging in the STEM disciplines. The presence of companies like Deloitte, Cisco, Kinross, and MDA gave it a very professional vibe, not to mention the high caliber of delegates. There was actually too much on the schedule for me to participate in, but I benefitted from everything I attended and consider my money well-spent in going. Keep your ears peeled for a WISE chapter coming to Waterloo, and if there is another WISE National Conference next year, I highly recommend going!

Elliot Lake: Algo Centre Mall Roof Collapse



JON MARTIN
4B CIVIL

On June 23, 2012, the town of Elliot Lake, along Highway 108 in Ontario was struck with a horrific disaster, the partial collapse of the roof structure of the Algo Centre Mall. The roof section, part of the parking deck section of the structure collapsed through the room and food court area down to the ground floor of the two story main building. The collapse injured more than 20 people, and resulted in the deaths of two people who were buried in rubble for four days before being found by rescuers. The remains of the mall will be demolished, and a new shopping centre is currently under construction for opening in late 2013. Over the intervening months since the collapse, investigations into the structural design, monitoring, and approvals of the mall have been regular pieces in the news, and class action lawsuits are also in the works.

Reports from investigating engineering firms have shown continual negligence which led to the accident, and are drawing attention to the threats of under-design and shortcuts to get in a low bid. Investigations have shown that the cause of collapse was the structural failure of a welded joint in the steel framing of the lower parking level, immediately above the second shopping level of the four storey building. The weld was severely corroded by salt water leaking through the concrete slab floor of the parking level, a design consideration that would seem to be an obvious issue in the Canadian climate.

A waterproofing system was designed for the structure but it was grossly unprepared for the conditions present, and was ultimately a significant contribution to the failure. The parking

level consisted of precast hollow concrete slabs measuring eight inches deep, four feet wide, and commonly up to 30 feet long, which were then laid on steel beams. Design calculations required the slabs to withstand loads of up to 120 pounds per square foot, but the slabs were not rated for that kind of loading by the manufacturer unless a composite concrete top layer was also applied. The engineer from the concrete company that eventually won the bid for the project and built the slabs also stated their system could support the 120 pound loads (despite their company specs stating that the maximum capacity was 87 pounds per square foot). Despite all this confusion, a concrete top layer was put in as part of the construction – but for the purpose of waterproofing the system, not for structural stability.

While it wasn't the actual concrete that failed in the collapse, the realisation that the slabs could be under-designed led to the decision to not fix the waterproofing system. It was feared that increasing the concrete layer used for waterproofing would overload the already strained flooring system. Unfortunately, this decision led to rapid deterioration of the steel structure beneath the floor, to the point where inspectors analyzing the debris described many of the steel bolts as being so corroded that they resembled something from a "marine environment". This kind of damage should have been noticed in inspections done year after year within the building, but every person who toured the building gave the structure a clean bill of health. Troubling images from before the collapse show tarps permanently installed in the anchor Walmart store to control constant leaking. How this was not identified as a concern is a worrying mystery. Structural testing submitted by NORR Ltd. stated that the welded steel connection that failed had deteriorated to the point where it could only support

13% of its original capacity.

The investigations into this tragedy are still ongoing, and new developments seem to be coming up every few weeks. The engineers involved showed gross negligence over the course of the years the mall was open to the public, and the incident has severely damaged the opinion of the professional integrity involved. While there are many opinions and reports around describing the way local's complaints were completely ignored, there is also the problem of engineers who advised action (increased

waterproofing, alternate parking structures, in-depth structural testing) but it was never carried out by the owner.

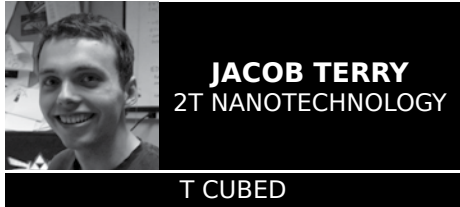
Every licenced engineer takes the responsibility for human life into their hands, and incidents like the Elliot Lake Algo Centre Mall show the serious consequences that can come when that responsibility is neglected or the message behind it ignored. While new regulations for building inspections are now coming out as a result of the collapse, this is a tragedy that could have been prevented, and should have been.



REUTERS/Nathan Denette

After reaching 13% of its original capacity, it only took a small load to bring the Algo Centre Mall down.

Kitschy Keynotes and Thoughtless Theft



You're sitting in an hour-long presentation with a full Broadway orchestra, a host who sounds at home on a game show, scenes replete with stereotypes of 50's-era, girls-only cocktail parties and nuclear families intended to connect with everyday people, and a full curtain opening and closing with credits. Every now and then, you're assaulted with an orchestrated six-tone tune you have come to recognize from the past year; It's sort of pleasing at first, yet by now, it's about as entertaining and welcome as CTV's relentless renditions of *I Believe* during the Olympics. Surprisingly, you're not at a D-list live show but at Samsung Unpacked 2013, the latest in a series of uncomfortably over-the-top performances that don't really tell you much about what makes their products so great, but do a very good job of showcasing how much money South Korea's largest *chaebol* has been able to pull in over the last couple years.

Samsung isn't alone in attempting to define their style through cringeworthy cheese, and they haven't earned the top spot for making audiences squirm. If that were an award, it would likely go to Qualcomm, whose keynote at this year's CES 2013 in January was not remembered for anything they actually announced, but instead for their increasingly disparately-connected cameos and a flow so terrible you weren't sure whether to laugh or cry. Starting with three categories of "today's youth", using 90's slang and corporate jargon, Microsoft CEO Steve Ballmer enthusiastically jogged onto the stage, then came Guillermo del Toro, then Big Bird, then Archbishop Desmond Tutu. At one point, *Star Trek Into Darkness* actress Alice Eve came on the stage to talk about a *Star Trek* app powered by Qualcomm technology, which turned into an incredibly awkward five-minute fake conversation between her and Qualcomm CEO Paul Jacobs in which Eve spent most of her time reading the prompter with clearly visible discomfort. The ever-bizarre conference ended with Maroon 5, unless you

watched the live stream, where Maroon 5 was dubbed over with Dido for no clear reason. What seems evident through the way both companies decide to show their content is that there is a level of insecurity in their ability to have their products explain themselves, so they feel the need to hype them up through glitzy marketing that distracts from the product, or attempts to overly explain it in an attempt to get the average user to understand what they're trying to do.

However strange Samsung's marketing is though, to its credit, it has been finding its own way of trying to present itself to consumers. Its phones too, which initially started out as very evident iPhone knockoffs, have started to differentiate themselves into their own type of device. While it was incredibly fair to assume that the original Galaxy S was effectively an Android copy of the iPhone 3GS, the Galaxy S III and S IV have branched out enough to define their own look. Yet, for areas where Samsung is not on top, it still depends on looking at what the market leader is doing and building their own version of it in what can only be a deliberate attempt to convince the consumer that their iteration is the same as what they are copying.

Even this week's announcement of a Samsung gamepad for their phones drew heavy comparisons to the Xbox 360 controller, from which it copied the same buttons, analog stick placement, and D-pad. While all the major console manufacturers use gamepad layouts inspired by the Super Nintendo (the PlayStation itself was initially designed to be a CD-ROM expansion for the Super Nintendo), they have found enough ways of differentiating from Nintendo's layout to avoid directly evoking the image of a Nintendo controller. Sony's DualShock controllers use shapes instead of letters for the four primary buttons, introduced dual-analog sticks to the console market, and redesigned the D-pad to keep its solution unique yet easy enough to use for anyone coming off of Nintendo consoles. The Xbox controller again introduced yet another D-pad style, distinctively coloured the four primary buttons and switched their positions. While some of these ideas may not have been that useful, the idea is that there is more than one way to make a



pocketgamer.biz

Samsung's gamepad draws many comparisons to Microsoft's Xbox 360 controller

controller, and there is more than one way to design a product. There is a problem if you are able to put two different products next to each other and notice how they look so similar before any other thoughts come to mind. It would be fair to suggest that when most people saw Samsung's solution, the first thing they thought of was the Xbox 360 controller. Not only is this unfair to Microsoft, who found their own way of implementing a gamepad; it's also unfair to Sony and Nintendo, since there is an external manufacturer who has now assumed that the 360 layout is the gamepad standard.

Again, at Mobile World Congress in late February, Samsung announced a Samsung Wallet app, which holds coupons, tickets, memberships and boarding passes, and also conveniently borrowed Apple's Passbook design, with a black background and colourful ticket-shaped rectangles organized in a floating column. The icon for the app, a part Samsung has yet to realize is one of the easiest ways to spot blatant plagiarism, is remarkably similar to Passbook's stack of tickets, even down to having the some of the same coloured tickets use the same ticket

shapes. Compare to Google Wallet, which uses a stylized W as its icon and has a bright, white background with Google-like icons, or Microsoft's, which uses a credit card sticking out of a wallet as its icon and a very distinctive design inspired by its Windows Phone interface.

These couple instances are only the most recent in a line of fairly obviously lazy design on Samsung's part, and because many are willing to reward them for their behaviour, they likely have no reason to stop in the near future. The point here is that it's acceptable to draw inspiration or small ideas from others, as that's how all ideas are made. What's not acceptable is to take blatantly what someone else has done and present it as your own, without making any clear changes to its presentation. It's unfortunate that other Android brands, like HTC's One or Google's Nexus, don't get more credit in the marketplace for being truly unique and innovative in what they offer. Hopefully in Samsung's attempt to define itself in the smartphone age, it will begin to find something that makes people think Samsung, instead of thinking about their competitors.

DNA Damage and Induced Repair with Intense THz Pulses



Terahertz radiation is currently a focus of intense study and research for its potential uses in medical diagnostics, security and general scientific research. As such, there are many questions that scientists must answer about the potential human health risks associated with the practical use of this radiation.

New research done on lab-grown skin samples suggests that short and powerful bursts of THz radiation may cause DNA damage but increase the production of proteins that actually help the body fight cancer. The work is done in collaboration between physicists at the University of Alberta and molecular biologists at the University of Lethbridge in Canada. "While these investigations on the biological effects of intense THz pulses are

only just beginning," said Lyubov Titova of the University of Alberta, a member of the research team, "the fact that intense THz pulses can induce DNA damage but also DNA repair mechanisms in human skin tissue suggests that intense THz pulses need to be evaluated for possible therapeutic applications."

But how does all of this work? We realize that THz radiation is sandwiched between the microwave wavelengths and the infrared wavelengths. This being the case, it acts like the microwave "relative" wavelength in the spectrum in that it is not energetic enough to break the chemical bonds that bind DNA together in the nucleus. However, these waves have just the right frequency to excite water molecules and thus produce heat – this is how your microwave oven works. Therefore it is thought that the principal risk of THz radiation is caused by heat-related damage.

Recent theoretical studies have shown that these pulses of THz radiation applied in picosecond duration may actu-

ally directly affect the DNA structure. It does so by amplifying the natural vibrations of hydrogen bonds that are essential in bonding the two strands of the double helix structure together and as a result, forming "bubbles" and openings in the DNA strand. This brings about the question "Is it possible for THz pulses to break DNA strands?" There have been earlier animal cell culture studies that shows THz radiation may very well directly affect biological function under specific conditions like pulse duration and exposure time.

In this first-of-its-kind study, the Canadian researchers have been able to reveal the effects of THz radiation on the DNA structure by using a marker known as phosphorylated H2AX. On the flip side, they have shown that THz radiation actually has an ability to increase the levels of tumor suppressors and cell-cycle regulatory proteins that help with DNA repair. This suggests that intense picosecond THz radiation damage to the DNA in human skin may be quickly repaired and

ultimately minimizes the risk of carcinogenesis. The skin sample that was used is a living culture of cells which were undergoing mitosis during the THz experiment.

"The increase in the amount of phosphorylated H2AX in tissues exposed to intense THz pulses compare to the unexposed controls indicated that DNA double strand breaks were indeed induced by intense THz pulses," observed Titova. Once DNA breaks occur, they can eventually lead to tumors if unrepaired. "This process is very slow and cells have evolved many effective mechanisms to recognize damage, pause cell cycle to allow time for the damage to be repaired, and – in case repair is unsuccessful – to prevent damage accumulation by inducing apoptosis, which is programmed cell death of the affected cell".

The Canadian researchers hope to explore the potential therapeutic effects of intense THz radiation exposure to see whether or not such treatment may be the new primary tool to fight cancer.

Why Campus Wi-Fi Will Always Suck



ERIN MATHESON
4B CHEMICAL

It started with a video call. Not just any Skype call to friends or family; this call was the mother of all video calls. The intergalactic master of social media, Commander Chris Hadfield, casually teleconferenced into our beloved University of Waterloo on February 15th, and both the University and social media channels alike were abuzz with excitement. Rightfully so, as even today just the pure idea of having a real time conversation with someone in the International Space Station as it zooms around the earth is mind boggling.

In hopes of getting in on the action, my friends and I were trying to follow the conversation via Twitter and the live stream that had been set up, but we struggled to keep up with what was going on. Despite the heavy traffic directed towards the event, it wasn't Twitter or the live stream site that was letting us down. We couldn't even connect to the internet to begin with – everyone's respective connections to Eduroam kept crapping out, and, needless to say, the lack of continuity somewhat hampered everyone's experience.

That's when I realized how ridiculous the whole situation was; the University (and arguably technology in general) has the means to set up a real time video and audio stream to someone in outer-freaking-space, but not enough attention is ever paid to assure that there is sufficient WiFi coverage to serve the 30,000 students dependent on, at least once in their academic career, campus WiFi. At first glance, that statement although true,

doesn't make a piece of sense. But the more I thought about it the more I realized, it made perfect sense. Infrastructure isn't sexy – and as a result so many things, including our precious campus WiFi, will always suck.

Now I know what some of you are thinking, and I know that most of you thinking this have probably dedicated a good portion of your time to infrastructure based efforts. You're thinking, "but roads and transportation and WiFi and all of these things are so important! Plus I work on them, so they have to be sexy!" Part marks. Infrastructure in its various forms is clearly essential. That concept is woven into the simple definition of infrastructure itself. What is being confused here is the divide between necessity and quality. Just because we need something as a person, group, or society to function, and just because its provided for us, doesn't mean its going to be very good, especially if its still capable of getting the job done.

I'll leave the sexy point up for debate between yourself and your own sub-conscious.

Allow me to illustrate, by looking at our smoggy neighbor to the East – Toronto. Toronto has always been notorious for its awful roads, and this reputation has been decades in the making. Particularly around springtime (mainly due to the typical temperature fluctuations in the area, but I digress) I would argue that you could find fewer holes in a piece of Swiss cheese than in any stretch of Toronto roads. The

remainder of the Spring and Summer are usually spent by road workers haphazardly patching up these various potholes and damaged roads, and I emphasize the use of the word 'patch'. Most of the city's major roads are mediocly repaired, but any residential areas usually have to cause a big stink to get any repairs done in a less-than-the-401-at-rush-hour level of traffic area. I'm pretty sure there's still the same pothole in front of my high school that's been there since I was a freshman, and that was before YouTube even existed. Stop laughing, I'm dead serious.

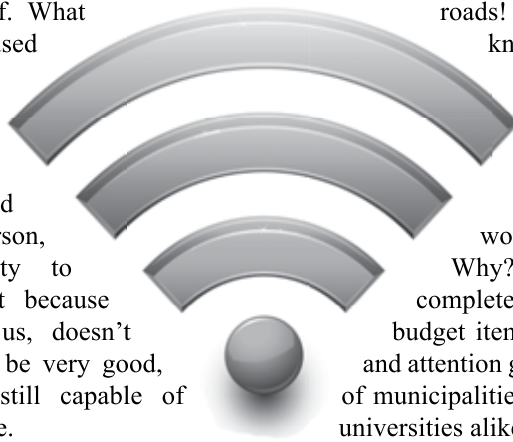
Now the solution here is obvious, right? Just pour more money into the city's infrastructure budget and fix those roads! Let Toronto be known as the city with roads strong enough to support its people and its mayor! Wrong! Doing that would be a total waste! Why? Because it would go completely unnoticed, and big budget items need to be flashy and attention grabbing. This is true of municipalities, governments, and universities alike.

Think about it. If you've ever driven somewhere where the roads are properly maintained, is the first thought to cross your mind, "Hot damn, this here is some solid pavement!" Odds are, probably not. If everyone in Toronto woke up tomorrow to the most structurally sound and uniform roads on the planet, there would be some initial surprise, followed by a witty hashtag and perhaps a new meme. However, this new hypothetical state of the art road system would never overshadow the true stars of Toronto, like the CN Tower, the

CNE, the ROM, or the Leafs' inability to make the playoffs. It would simply fade into the ether of what everyone considers to be normal, and wouldn't be discussed again.

The same logic applies to Universities, and not just Waterloo. Would you be more compelled to go to Queens if they had 'our WiFi is really fast and reliable!' smeared across their posters? Would we make less fun of Laurier if their go-to bragging point was, 'our online LEARN system never crashes'? Could you imagine someone explaining that they chose Waterloo as their university because, 'the on campus computers were really fast and cater to all of my computing needs,' or 'our online job searching and matching system is so user friendly, and totally scalable'? Nope, neither can I. When faced with the decision of what to spend money on, it becomes pretty clear what types of efforts are going to win support – the groundbreaking research, the big media events, the intergalactic teleconference – because it looks better on a poster and it gets people excited, not necessarily because it benefits the masses. I'm not saying that uWaterloo, or Toronto, or any other institution for that matter doesn't support their infrastructure at all – quite the contrary. If there was no support to begin with, these institutions wouldn't exist. The support that's in place just happens to be outstandingly mediocre at best.

Granted, people will always find something to complain about, because it's one of our favorite past times. What I've finally come to realize though is that if that nagging issue happens to be one of infrastructure, I'm not about to hold my breath in waiting for something to change. I'm sorry friends, but I'm pretty sure campus WiFi will always suck.



The Greenest Commercial Building in the World



NINA FENG
2A ENVIRONMENTAL

LEAFY THOUGHTS

The Bullitt Center, a 52,000 square foot edifice in downtown Seattle is touted as being the most environmentally friendly commercial building in the world. Set to open on Earth Day (April 22, 2013), the structure has been under construction since July 2011 and expects to have a 250 year lifespan, as opposed to the assumed 40 years of the average office building. It is a project built by the non-profit Bullitt Foundation, focusing on environmental sustainability.

The building is energy and carbon neutral, with a solar panel system on the roof and an energy conservation system poised to reduce the consumption to 1/3 of that a typical building of similar size. It will still be connected to the municipal electricity grid for times when electrical consumption exceeds that of the electricity generated by the photovoltaic panels. However, it can be expected that there will also be days when the electricity generation is greater than the consumption, creating overall neutrality in energy. The water and waste water treatment systems are designed to stand apart from the centralized municipal systems. The water used throughout the building is set to come from a 56,000 gallon rainwater collection system beginning on the roof, purified by UV light, and stored underground. However, this poses a legal challenge to designers, as the city of Seat-


tle requires that water be purified using chlorine. The water system may have to be connected to the city's water treatment plants if no agreement or compromise is reached.

The site also supports a lifestyle free of automobiles by encouraging walking, cycling, and public transit instead. Stairways are the primary modes of ascent and descent. There is no parking lot, only bike racks. All windows are large and can be opened, allowing for natural light and fresh air to be used as much as possible in place of their artificial counterparts. Cooling, water retention, and building aesthetics are greatly enhanced by the green roof. A geothermal heating method will be used for the building. The building qualifies as a Living Building under the Living Building Challenge by meeting various environmental standards and in being mostly self-sufficient. An example of a requirement is that none of the 360 toxic 'Red-Listed' chemicals commonly found in building components will be used in building materials and construction. The lumber must also be sourced sustainably.

Sustainable design is of utmost importance in a time where the availability of resources on Earth is on the decline but the demands of the 7 billion humans living there are ever increasing. An urban commercial building designed to be environmentally friendly serves as an inspiration and a guideline for future development operations. Hopefully in the future, the typical large-city building will be just as self-sufficient and health-encouraging as the Bullitt Center.

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What I Learned from Being President



YASSER AL-KHDER
PRESIDENT

I'm not a fan of clichés, but seriously, where did the term go? It seems like just yesterday I was starting my first on-stream term as the President. It's been a great term folks, with a lot of ups and some downs. But it's not over yet! We still have a handful of events coming up. Potluck, Coffee House, EOT, EngPlay, and more!

Why am I writing this? Who am I writing this for? I don't know. Maybe I'm writing it for someone who's thinking about running for President next term, and this might help them with their decision. Maybe I'm writing this for former Presidents, so when they read this they can have a good chuckle. Maybe at some point in the future, a President will read this and think "Yea, I feel the same way too". Or maybe I'm writing this for myself; maybe I'm writing this down so I can really see what I learned and hopefully become better.

So, here goes.

Things Will Almost Never Go As Planned

You can plan a project or an event as much as you want. You can even plan it to the

minute. Something will still go wrong. It's probably not even your fault. You probably couldn't have seen it coming, and even if you did, there's not much that you could've done.

So why am I telling you this? Am I trying to be a downer, or a "realist"? No. I want you to be aware of this fact, and give you some advice on how you can minimize the chances and the consequences of a plan going off track.

First of all, if you have a timeline for your plan, thrown in an extra 20%-30% of time. Humans tend to underestimate the time needed to complete a task, and overestimate their productivity. We all do it, and we know that. You didn't pull that all-nighter because you planned it.

Secondly, make your plan flexible. There is something as too much planning. Mechies, think of it as over-constraining a part. Other disciplines, I'm sorry: you're going to have to come up with your own analogy. The best plans are the ones that can adapt to different circumstances.

Everyone Will Give You Their Two Cents

The government is getting rid of the penny, but that doesn't mean that people will stop giving you theirs. It seems that everyone has "advice" for you, everyone is telling you

what to do, and everyone is telling you how to do your job.

I hate to break it to you, but this is your job. Your role as the President of the Engineering Society is to represent the Society. This means that you have to listen to the concerns of its members (i.e. Engineering students) and try to fix their concerns, or at least direct them to the right direction to go about fixing their problems. If people are not coming up to you and telling you how to fix the Society, then you're doing it wrong.

What can you do about it? Well for one you can accept the fact that that's a major part of the President's role and enjoy it. I actually liked it when concerned students come and talk with me, and it was one of the reasons that I ran for President last spring.

You also need to learn when to pursue an issue. Is it worth it? Does it affect a lot of students or just a select group? How will it affect other students? Can you actually fix it? These are some questions that you should be asking yourself, your fellow exec, and possibly the student(s) who brought it up.

And for the love of God, don't disregard the first years. No, they don't have experience. No, they don't know what has been brought up in the past, or how things work. But that's the exact reason you need to be listening to them. Having a different perspective can be exactly what the Society needs.

Plus you don't want to give out the wrong message and drive them away.

It is Very Hard to Separate the Business and the Personal

Let me clarify this. As President, or an exec member for that matter, you deal with and talk to students all the time. A lot of these students are people you know, and some of them are even your friends. This is where it gets tricky; your personal relationship with students will affect your relationship with them as a President, and vice versa, and you have to be aware of it.

It's weird but PD7 (Conflict Resolution) got it right: focus on the problem, not the person. Once you do that, you will understand the problem better. You will also realize that what seemed to be a huge conflict was mainly due to the personal relationship you have with the person, rather than the problem itself. Similarly, don't let EngSoc arguments affect your personal relationships. End the meetings on a good note. Remind them, and yourself, that you're doing this to better the Society.

I can go on some more, but this article is getting way too long for Andrew to edit, and I fear that he will start chasing me with a stapler and a copy of the IW.

See you all next term.

Yasser.

So it Seems I Am Almost Out of Words



KRISTINA LEE
VP EXTERNAL

Howdy, strangers,

It's officially spring and you know what that means... National Engineering Month

is nearly finished!! I would like to thank all the lovely directors who have helped run the AWESOME NEM events this term! You guys did a great job and I look forward to working with those of you returning next year.

I would also like to give a shout out to the hockey team who represented Waterloo at the ESSCO Hockey tournament. I heard

you guys played like angels and represented us well. For those that also made the trek down to Hamilton that weekend for the Cup and the Mac Musical, thank you! Waterloo now has the Cup!

There was a Women In Science and Engineering (WISE) conference held at UofT on the St. Paddy's Day weekend that a few Waterloo students attended. The WISE

Conference was an integrated business and technology competition. Keep an eye out for a WISE conference document!

It's been a great two months as VP External Elect, but watch out in the fall: I'm going to be a full VP! I look forward to working with you all- if you have any suggestions, please let me know!

Peace out until the fall, B-Soc!

Spending, Spending, Spending!



PETER ROBERTSON
VP FINANCE

****HEY YOU!** Were you a director this term? Then you probably want to come to the EngSoc meeting tonight... Come to POETS at 5:30 tonight to find out why!***

I finally have something to report! A couple weeks ago the Sponsorship Committee met and came to a decision on allocations which was brought to Council to be ratified. After some mild discussion and questions Council ratified the allocations seen to the right. To claim your funding, please fill out a society expense form (available online or in the Orifice) and submit your receipts to me. Remember that funding from this term can only be reimbursed by myself (B-Soc), and on a B-Soc term. If you have any questions regarding the Sponsorship decisions this term, please don't hesitate to email me.

Come out to the EngSoc meeting tonight to see what the ECIF Committee is proposing to fund this term. If ratified, these purchases are things that will benefit as many Engineering students as possible while they last. You can always submit an application for ECIF through the EngSoc website, and each term the Committee will meet to go over the current applications. ALSO! If you think you'd like to participate in the decision process, we will be electing 2 new Committee members to represent B-Soc for the next year (May 2013 - April 2014) at tonight's Council meeting. All you need to do is get a friend to nominate you at the meeting and then convince Council you should be chosen via a 30 second speech.

I am pleased to inform you that this year we

received funding from SLEF (Student Life Endowment Fund, run by FEDS) to purchase the remaining 3 LCD screens we need to go ahead with the LCD advertising project. We will hopefully have the system up and running by the time everyone returns in the Fall! We also will hopefully receive funding from WEEF to upgrade the aging computers in the Orifice to help better administer the Society. This is a continuing process that should hopefully be completed with funding in the Spring term.

Finally, we received funding from SLEF

for an LCD screen to be installed in the back room of the Orifice. Some of you may have heard rumbling of the planned renovation to extend the back room. We're just waiting on confirmation from the administration, but if all goes well, things should be looking fancy by the end of May. The upgraded back room will be used for meetings and eventually will be equipped with everything any good meeting room needs. This LCD screen is only the first step in an exciting process to give our office a much-needed face-lift!

With the term drawing to a close, I'd like

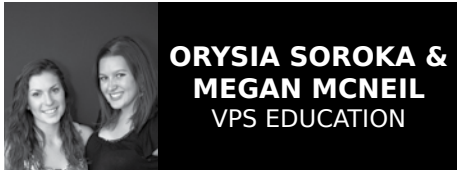
to take this opportunity to thank all the Commissioners, Directors, and most of all you, the students, for making my first term as Exec so great! It's been a pleasure to work with all of you and if you feel the same way, pay attention for Directorship applications for the Fall opening soon. You too can give back to the Society by organizing and running the various events and services we offer!

Come out to the first EngSoc Council meeting this Fall to see my summary of this term's finances and have your say in how we spend your money in the Fall!

Team	Item	Requested	Allocated
Association of Voice and Sound	Instrument Rentals	\$ 50.00	\$ 50.00
Baja SAE	Hubs and Uprights	\$ 850.00	\$ -
	Suspension	\$ 700.00	\$ 700.00
	Paints, Lubricants, Gas	\$ 300.00	\$ -
	Safety Equipment	\$ 100.00	\$ 100.00
EngFOC	Winter Leader Retreat Lunch	\$ 767.61	\$ 899.99
Engineers Without Borders	General Sponsorship for One Junior Fellow	\$ 500.00	\$ -
	Vaccinations for One Junior Fellow	\$ -	\$ 600.00
Formula SAE	Portable Shades Tent	\$ 800.00	\$ 600.00
Gradcomm 2014	Preliminary T-Shirt Order	\$ 500.00	\$ 400.00
UW Clean Snowmobile Team	Walbro Diagnostic Software + Cable	\$ 300.00	\$ 300.00
UW Nano Robotics Group	Polymers for Robotic material	\$ 750.00	\$ 750.00
	Electronic Components	\$ 750.00	\$ -
	Custom Micro-Magnets	\$ 800.00	\$ -
	Wafers	\$ 500.00	\$ -
UW Robotics Team	NASA Competition Fee	\$ 2,175.76	\$ 850.01
	FireFly®MV CMOS Camera (3)	\$ 825.00	\$ -
	3D Printing Costs for 10 Gearbox covers	\$ 1,370.00	\$ -
UW-DNA	Eppendorf Pipette (1)	\$ 500.00	\$ 500.00
Waterloo Rocketry Team	UW Engineering Model Rocket Competition Material	\$ 350.00	\$ 350.00
	Gas Expense for Travel to Competition (Utah)	\$ 500.00	\$ 400.00
Total Sponsorship Requested / Allocated		\$ 13,388.37	\$ 6,500.00

Peter Robertson, VP Finance

It's Halftime, I'm Outta Here



ORYSIA SOROKA & MEGAN MCNEIL
VPS EDUCATION

Finals are around the corner, but so are all of those end of term project reports to complete as well. This is the time of year where stress can completely take over, but it is important to keep calm and focus. Sounds easier than done? I feel your pain, but the best advice I can relay is to find the study method that works best for you. Another thing to keep in mind while studying is to keep a regular schedule which includes important things like sleeping, eating, and bathing. This regularity will help your body feel its best. A healthy body will help your brain be good to go for the studying marathon I know you all have planned.

As the term wraps up, that means surveys! By now most of the course critiques should be complete; thank you for completing these surveys honestly. These critiques really do matter to the professors, departments, and faculty and are taken into account for future offerings of the courses that you are currently taking. The other survey is the debt load surveys, these surveys are used to estimate the current debt

load on students across the faculty based on program and year. The report of these result can be found just to the right of this article. Thank you to all the academic reps who submitted their classes surveys and apologies for all the emails.

That's it, that all folks, this is my last article as your Vice-President Education. If you are confused as to why that is, let me give you a bit of background. Due to their 8 month co-op schedule, students in Nanotech engineering can't run for 8 month executive position without a partner, which is where I came in. I became VP-Ed for Winter 2013 and Orysia Soroka will be VP-Ed for Fall 2013. Who is this Orysia character you ask? Great question. She is a vibrant, charismatic, and humorous individual, with often interesting twitter hashtags. All in all, she is an awesome person and I'm excited for everyone to meet her as the incoming VP-Ed. It was a great experience representing engineering students on education issues and thank you everyone for your support during my term.

With that I bid farewell to all of you but I will leave you with one last fun fact: did you know that a group of pugs is called a grumble? Too cute right?!

Keep Smiling,
Megan

Directorship Applications Open for Fall 2013



CATHERINE DECLARO
VP INTERNAL

Happy Spring, you lovely people!

Warmer weather is in the air and all I can dream about is ice cream and lying in the sun. As the term comes to an end, I can't help but reflect on my first term as your VPI and how awesome this term has been. Yasser did it last week, but I want to give a huge thank you to the directors who made this term happen. (You know who you are!) It was definitely a difficult term, with all of the regular winter events, snow, and the week we lost, but we still managed to make this term happen and everything worked out!

Though things are winding down, there's still a couple of events left in this term's calendar, so make sure you soak up all the fun time before the co-op term starts!

EngPlay will be showing once on Wednesday, April 3 and twice on Sunday, April 7. The directors and cast have been putting an insane amount of work into the production, so you know it's going to be great!

The End of Term party is happening on Friday, April 5 at 8 pm in POETS. Come celebrate the end of the term with your fellow undergrad engineers and say your final farewells to the 2013s!

On top of that, the end of the term means that directorship applications are opening up again! If you're looking to take up a leadership position, get more involved in extra-curricular activities, or have an idea for an event or service that you think could benefit undergraduate engineers, you should apply for a directorship! Directors work with the executives and commissioners to run specific events and services. Some of the directorships include:

- Santa Claus Parade
- Resume Critiques
- Year Spirit
- TalEng
- EngPlay
- Music (i.e. Coffee House)
- POETS Manager
- Athletics
- Outreach

For a complete list of directorships, check out the EngSoc website! If you don't see something you like, feel free to suggest an idea for a new directorship. Applications will be open soon, so be sure

W13 Engineering Co-op Student Debt Load Survey

1 Term Total	Total Responses	982	Number of surveys sent	2148	Response %	46% core classes	# of Students in	3609	
2 Does your family support you financially? (962 responses)	Yes	70%	No	30%					
3 Average Cost of Living for a 4 month School Term (941 responses)	\$11,621								
4 Average Cost of Living for a 4 month Work Term (772 responses)	\$4,461								
5 Have you applied for local aid or other bursaries to pay for school? (959 responses)	Yes	48%	No	42%	Not Yet				10%
6 Have you applied for OSAP? (968 responses)	Yes & Received	48%	Yes & Denied	13%	No				39%
7 Do you have a loan for academic purposes? (963 responses)	Yes	43%	No	50%	Not Yet				7%
7a How much is the student loan? (565 responses)	1-999	10%	1000-1999	4%	2000-4999				10%
	5000-9999	27%	10000-19999	32%	20000+				17%
8 Has the differential tuition increases caused you hardship? (953 responses)	Yes	51%	No	22%	Not Yet				26%
9 How much debt do you expect to be in by graduation? (933 responses)	No Debt	23%	<4999	11%	5000-9999				11%
	10000-19999	19%	20000-39999	22%	40000+				14%
10 Do you live at home while at school? (962 responses)	Usually	7%	Used to	1%	No				91%
11 Have you lived at home while on work terms? (876 responses)	Always	11%	Sometimes	48%	Never				42%
12 Average of the weekly salary while on work term (595 responses)	\$718								

to keep an eye out for those!

If you have any questions about the positions or want some advice on which ones to apply for, feel free to contact me or any of the other executives! We'd be

more than happy to chat.

Although this is the last of my IW reports for the term, I can't wait to see you in the fall and find out what that term brings!

Upcoming Events Calendar							
Wednesday March 27 EngSoc Meeting #6 5:30 PM POETS Coffee House 8:00 PM POETS	Thursday March 28 Feds General Meeting 12:30 PM SLC MPR	Friday March 29 Good Friday	Saturday March 30	Sunday March 31	Monday April 1 April Fool's Day Easter Monday	Tuesday April 2	<p>Check out up-to-the-day event postings on the EngSoc website at engsoc.uwaterloo.ca</p> 
Wednesday April 3 Mental Health Puppies 2:00 PM POETS EngPlay 8:00 PM AL 113	Thursday April 4	Friday April 5 Campus Clean-Up 2:00 PM ENV 3 EOT 8:00 PM POETS	Saturday April 6 EngPlay 2:00 PM AL 116 EngPlay 5:00 PM AL 116	Sunday April 7	Monday April 8 Lectures End	Tuesday April 9 Directorship Appreciation 5:00 PM	

Show Me the Money!!

Laurin Benson & Brock Kopp
WEEF

Hello reader! You may have noticed a serious lack of WEEF-related content lately, and we take full responsibility for that. However, it is our hope that this magnificent article will satisfy all your deepest desires relating to WEEF. Contained in this update are... W13 Funding Allocations, W13 Participation Rates, and a fond farewell!

First up, the Winter 2013 proposal season!! As usual, WEEF had \$60,000 this term to allocate towards deserving undergraduate initiatives and projects. In total, 26 proposals were received, with 7 from the Departments, 16 from Student Teams, and 3 in the miscellaneous category. These requests totalled \$137,364 and ranged from Ion Chromatography systems, to computer upgrades, to materials for rocket launching rails. This term total was significantly less than the \$300,000-plus numbers that had been seen in previous terms, but still required a lot of consideration. After two nights of presentations from all submissions, the Funding Council sat down to discuss and debate how to allocate the funds. At the decision meeting, 30 of the 43 on-stream classes were represented. Though this number was enough to meet quorum, it shows that approximately 70% of the representatives were making decisions for 100% of the student body. Make sure your class has an active WEEF Rep!!!

Even so, it was a very successful meeting and we would like to thank the incredible representatives who have always been willing to ask the right questions and make the tough decisions. We also hope that this term can be the first of many which involve burritos. The funding allocation results can be seen in the accompanying table. Shaded boxes indicate proposals which received

full funding (YAY!), and items with strike-throughs indicate proposals who did not have an accompanying presentation (*sad panda*).

In the end, due to a notably smaller amount of requests from the Departments, a funding split of 58% for departments and 42% for student teams and miscellaneous resulted. This deviates from the target of 70%-30%, but the change was agreed upon by a unanimously positive vote from the Funding Council.

For those who received funding, congratulations, and please check the WEEF website (www.weef.ca/proposals.php) in the coming weeks to see itemized funding allocations. You must follow the spending that is outlined in the allocation and ensure that you are clear about what specific proposal and items you are referring to in every claim. Also, these decisions are not yet approved by the Board of Directors, who will meet on April 1st, so these amounts will likely not be available for spending until Spring 2013. For those who did not receive funding, or their desired amount, WEEF encourages you to submit a proposal again next term. Also feel free to contact WEEF if you have questions or concerns about how our decisions were made.

Now for our second item of business, Participation Rates. Yes that's right! The semi-public shaming on a class-by-class basis that we all look forward to each term! A breakdown of the 40+ on-stream classes and their participation in WEEF can be seen in the accompanying figure.

The Winter 2013 overall participation averaged in at 83.7%, which is fantastic. This 83.7% can be proud to be legitimate stakeholders in some truly incredible teams, labs, projects, and research that make the University of Waterloo what it is today. Just consult the allocations above to see the difference that your contributions are making.

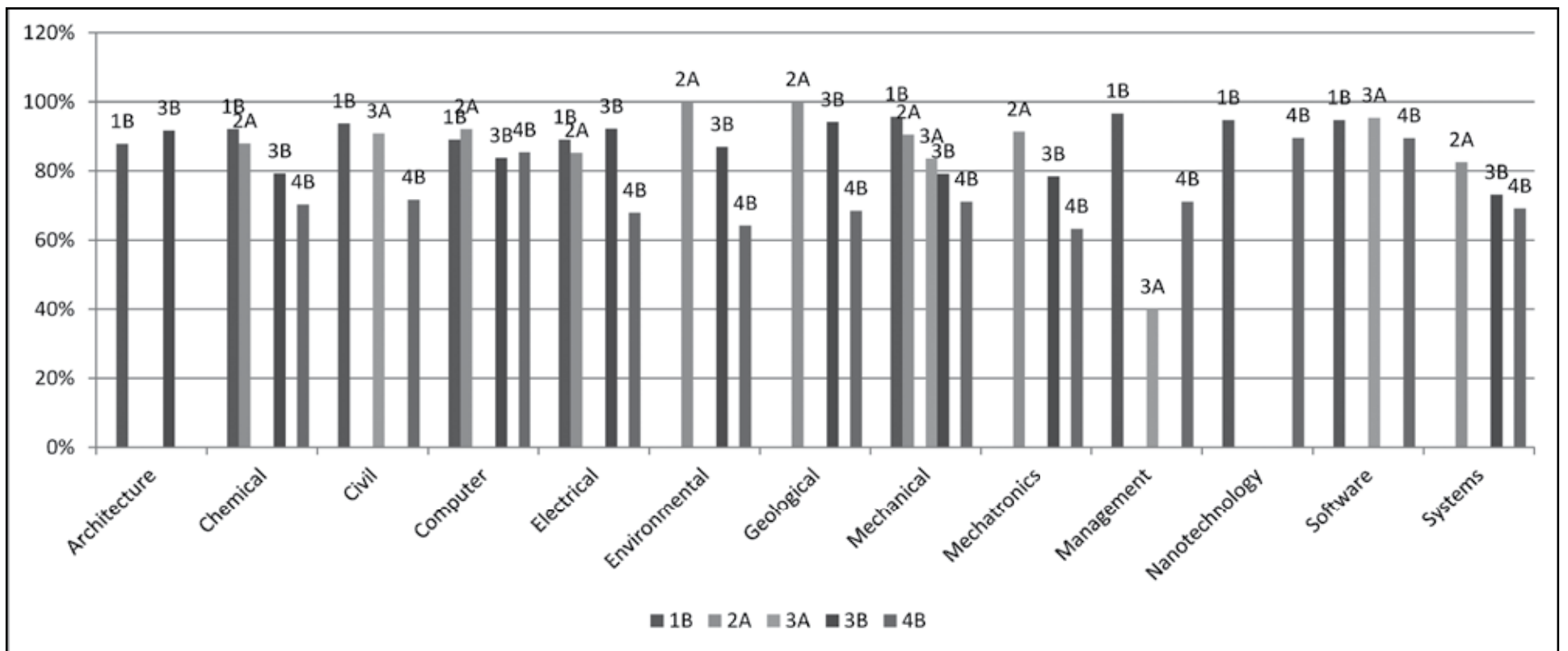
Proposal ID	Title	Amount Requested	Amount Allocated
Faculty Proposals			
WP-427	Chemical Engineering Capstone Project Lab Equipment	\$9,159.00	\$9,159.00
WP-426	New Ion Chromatography System	\$41,000.00	\$16,075.00
WP-408	ECE CPH-3682 Computer Upgrade	\$4,920.00	\$4,920.00
WP-409	ECE Computer Memory Upgrade from 4G to 8G	\$1,200.00	\$1,200.00
WP-410	ECE - Linux Computer Lab Increase	\$1,340.00	\$940.00
WP-411	ECE - Linux File Server Upgrade	\$2,000.00	\$2,000.00
WP-412	ECE - Linux Computer Lab and Server Upgrade	\$550.00	\$550.00
Total		\$60,169.00	\$34,844.00
Miscellaneous Proposals			
WP-438	University of Waterloo IEEE WarBots	\$3,600.00	\$1,200.00
WP-442	Iron Warrior Office Improvement	\$746.00	\$746.00
WP-435	EngSoc Computer Updgrade, Part II	\$3,780.00	\$1,788.00
WP-429	Aquaponics Sensors	\$682.00	\$682.00
Total		\$8,808.00	\$4,416.00
Student Team Proposals			
WP-428	Midnight Sun WEEF Proposal Winter 2013	\$4,000.00	\$2,000.00
WP-419	UW_NRG WEEF Proposal Winter	\$3,000.00	\$1,000.00
WP-436	UW Alternative Fuels Team W2013 WEEF Proposal	\$2,500.00	\$2,000.00
WP-413	UW Clean Snowmobile Team Winter 2013 WEEF Proposal	\$2,050.00	\$1,742.00
WP-417	UW Robotics Team WEEF Proposal W13	\$3,662.00	\$1,860.00
WP-432	Waterloo Rocketry Team	\$2,650.00	\$1,550.00
WP-415	Request for tricopter funding	\$2,100.00	\$1,700.00
WP-439	WatSat Satellite Prototyping	\$1,265.00	\$665.00
WP-434	Formula SAE: Wings by WEEF	\$3,090.00	\$1,290.00
WP-430	UW DNA - WEEF Funding for Winter	\$5,000.00	\$3,500.00
WP-437	Formula SAE Electric	\$2,440.00	\$2,440.00
WP-440	Anaerobic Chamber for Waterloo iGEM Team	\$21,000.00	\$1,000.00
WP-421	UWSA replacement paper cutters	\$931.00	\$0.00
WP-433	Proposal for Makerbot Replicator 2 - 3D Printer	\$2,199.00	\$0.00
WP-421	Feds Water Bottle Fillers	\$12,500.00	\$0.00
Total		\$68,387.00	\$20,747.00
Grand Total		\$137,364.00	\$60,007.00

Shout outs go to the 2A Environmental and Geological classes, who were the only two to hit the beautiful 100% participation! Thank you! As for who you need to trip in the hallway, I think you can consult the graph for yourself ;)

And so, apart from the Board Meeting in April, it would seem as though the WEEF term is winding down. We would like to

close our last article on behalf of WEEF with a big thank you! You folks always keep us on our toes, and we will miss it. We also would like to wish the best of luck to the incoming Directors, Ben Pratt (A-Soc) and Himesh Patel (B-Soc).

And remember kiddies, WEEF IS GOOD.
www.weef.ca
weef@uwaterloo.ca

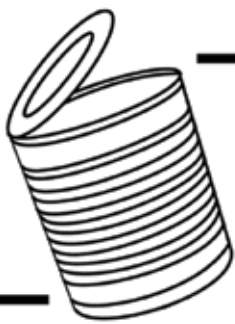


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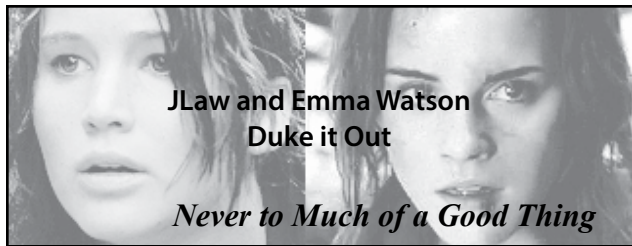
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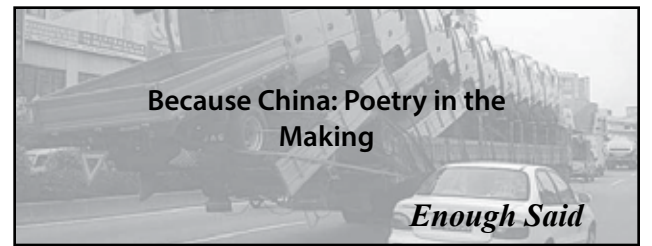
JLaw and Emma Watson
Duke it Out

Never to Much of a Good Thing



Engineering Supermodel
Strikes it Big

Full Interview: Uncut



Because China: Poetry in the
Making

Enough Said

Flails hands in the air.

Now making more money than the Imprint; Suck on that!

Waterloo Converts PAC to South Campus Hockey Arena Following Recent Hockey Successes

APPLE JACKS 3M MAKES COOL TAPE

The University of Waterloo announced last week that the Physical Activities Complex would be converted to an NHL-sized hockey arena following the buzz its men's hockey team created when it qualified for the CIS National Championship for the first time in 15 years. The new complex will consume the space currently occupied by the Village 1 Green, Physical Activities Complex and Student Life Centre, and Ring Road will be redirected slightly to accommodate for the new building's footprint.

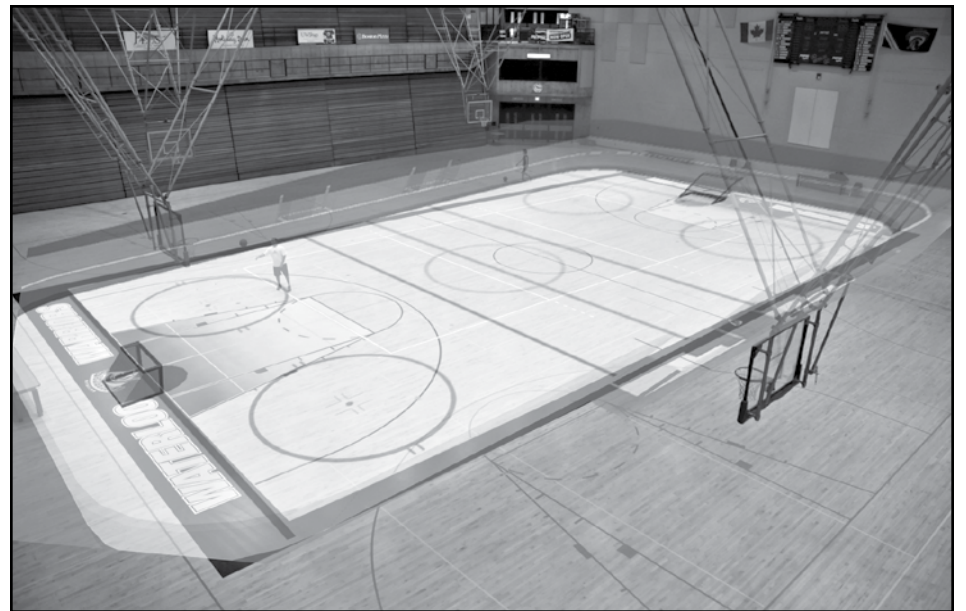
Sam Slackerman, the athletics department's communications director, exhibited excitement for the new development and the university's focus on excellence. "Waterloo has always prided itself on innovation, and our new hockey arena will be a good way to showcase that Waterloo cares about its athletics as much as its academics," Slackerman stated. "Having people pay attention to one of our teams is as exciting as it is surprising, so we've decided to capitalize on it and focus solely on hockey as a department."

As part of the change, other teams will no longer be supported. This is to allow the university the ability to focus solely on the only successful team Waterloo has yielded for hopeful fans in years. A proposal to replace Black and Gold Day football game with a hockey game was leaked shortly after the announcement by an anonymous user on Reddit, but university representatives had no comment on the matter when questioned by

The Tin Soldier. The proposal also included a recommendation to university administrators to replace Warrior Field with a student services building, citing a need for increased student space on campus and making up for the loss of the Student Life Centre. Particular focus was to be placed on individual study space, a need viewed as unmet by the multiple floors of individual study space currently available to students in both campus libraries.

Money recouped from no longer supporting the infrastructure for other teams will be directed towards dental surgery for members of the hockey team, to ensure Waterloo players perform their best while looking good for the cameras. Critics of the proposal pointed towards Columbia Icefields as an example of an athletic centre more fit for the hockey teams which already use it, but by providing equivalent services in the south campus, Slackerman believes that students will be more willing to partake in what the athletics department believes will be Waterloo's favourite pastime. "Hockey is already a popular sport across the country," Slackerman noted, "and we believe Waterloo is in a prime position to become a leader in the hockey research and development fields, finally giving us something athletic that gains the respect of the community that Laurier can't beat us in." Waterloo President Feridun Hamdullahpur echoed this belief, stating that the university was "laser-focused" on this new initiative.

Each academic unit is also working towards new ways to advance Waterloo's dominance in the sport. Members of the ap-



Andrew Fisher

Waterloo is "laser-focused" on building a new arena complex which will occupy the PAC, V1 Green and portions of the SLC

plied health sciences faculty will be directing new research projects towards hockey-related injuries, movements and optimizations, to mathematically determine optimal movements for players. New engineering research grants will be earmarked for nanotechnology researchers, who will be designing new materials in tandem with members of the science faculty that keep players wearing less bulky equipment while still being able to maintain a level of safety similar to previous uniforms. Computer science professors will embark upon a five-year plan to mathematically simulate plays to determine which are

most efficient to achieve the highest score possible in each game. English professors will aim to discover the most effective trash talk for players to use on the ice by 2015, which will agitate and demoralize the opposing team. Environment faculty researchers aim to study the plants around hockey arenas and examine how their aromas make them "aware" and "one with the ice, Mother Nature and the planet."

A report on the progress of Waterloo's new hockey initiative will be released as part of the culmination of Waterloo's Vision 2020 plan.

RIM Changes its Name to BlackBerry

CHERRY POPPER 6B MEAT-SPINNING

On January 30, 2013, Research in Motion announced that it will now operate by name of BlackBerry. Of course, this brought a great deal of confusion to many University of Waterloo students who desperately wanted RIM jobs in between their study terms. When asking these students about why they wanted RIM jobs so badly, many of them said that it was because of the memorable hands-on experience that the upper years brag about. Some of the students went even further by saying that they like the way the products from the company feel in their hands and would like RIM jobs to help progress the stroking ability of the new touch screens. Fortunately, most of these students have settled down. By understanding why the change was made, and now hope to POP BlackBerrys over the four months. Just as an aside, POP stands for Professionally Optimized Personal so get your head out of the gutter. But in all seriousness, once you go black you never go back, as it appears to be the general feeling for most University of Waterloo students who have worked at BlackBerry.

The company is also hoping that combining the name change with their feud against Apple will bring a new group of buyers into the market. Some have started calling it "The Battle of the Fruits," and BlackBerry is hoping that this will help get them the attention of technology haters, animal lovers, and even vegans, so that BlackBerry can once again dominate one area of the market. In fact, "The Battle of the Fruits" has become so intense in the technological world that, Google is hoping its Key Lime Pie will help give them upper hand as they enter the new year. However, some may say that this is cheating because, unlike BlackBerry and Apple, Google prefers to keep its external qualities the same (such as its name) while changing the internal interaction to remain relevant within the group (use of lime).

In addition, BlackBerry is hoping that the name change will help settle the confusion of whether or not the company is a telecommunication developer or one of the largest, rim specialized, car garages in Canada. The company reported a record amount of soccer moms that entered the property in hopes of getting spinners installed on their mini-vans last year. When

asking the local mothers at a nearby soccer field about why this is happening, they expressed that their confusion was due to the many buildings with empty parking lots. They thought it was a special garage where you leave your car outside until it's ready for its new rims.

Only the future knows about whether or not changing the name from RIM to BlackBerry makes any significant improvement to the company, but until then one question that needs to be answered is, "is the BlackBerry symbol supposed to look like a blackberry?"

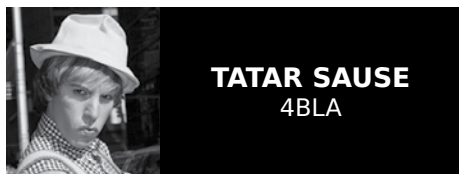


asnek.com

Students hope to POP (Professionally Optimized Personal) BlackBerrys during their once called RIM jobs

Letter From the Editor

Interior Designer Hired



With the relocation of the Iron Warrior Office, it has been brought to my attention that the new location is, despite what people say, absolutely drab. In my fabulous opinion, a room which needs to be worked in, must be a room that is worked on beforehand. Therefore, I have taken it upon myself to use the surplus budget of the term to hire myself on as the new Iron Warrior Interior Designer. I decided against using IWID for my title as it is much too short for my liking. Despite initial controversy of my contract, it became a unanimous decision by the Advisory Board after a quick demonstration of my handy work. Let's just say my many years of experience handling paintbrushes won them over.

My first responsibility as Iron Warrior Interior Designer will be to pick out the wall colours for the new office location. With a lack of windows, it is quite obvious a cheerful colour is needed to liven the place up. Now, one does not just choose one colour for the walls, but two or three to bring dynamic contrast. Since I have worked with many different colours before, it was very easy to pick the right combination - a darker tan and blue.

The furniture choices will be my next decision. As most of you know, furniture comes in all different shapes and sizes, so to get some inspiration, I took a trip to the gym. I find the gym provides the perfect atmosphere for self thought and,

within minutes, my inspiration came to me - large black leather sofas with steel accent tables on either ends. I always find mixing leather and steel bring such contrast to the room, but at the same time make the room feel energized.

Other furniture features will include a long cherry accent table along one wall. For those who don't know, cherry is a gorgeous wood, which offers the softness of pine but the sturdiness of oak. It is also a very warm wood which will work really well against the leather. I also thought of glass components, but my inner designer said "uuuh uuuh, no way mister. Glass is far too hard and cold to mix with leather and wood." Listen to my inner designer, I steered clear. Hahaha, get it, steered clear. Oh, I am just tooo funny!

Now comes my favorite part of the entire experience, THE ACCESSORIES! Omg accessories are such a key feature to any room and are so much fun to pick out. I think some beautiful round accent pillows would highlight the leather sofa. I was thinking white ones with a fur like fabric to add some texture. But only two, because the first rule of thumb for pillows is always keep them in pairs. There will definitely be a few throws (the designer word for blanket, duh) to add texture and also functionality. The school gets quite cold during the late nights of production weekends, so it is always important to wrap up tightly. There will also be a rug, but I haven't quite decided on the style yet. However, it WILL NOT be one of those animal rugs. I just find the thought of rubbing against the animal fur of the rugs to be disturbing, so I just avoid them altogether.

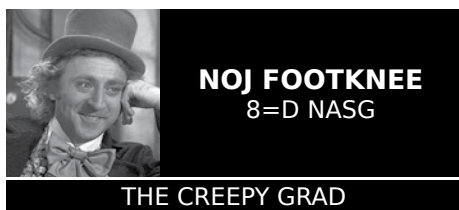
Speaking of late nights, the room will

for sure need some lighting. Although these have been used for decades, I still appreciate the simplicity of the pole light. Its long slender frame with large lamp shade on the top are a simplistic design cue which is both versatile, yet not understated.

Lastly, to finish up the room, I will for sure need to add some decorative vases. These can be filled with almost anything you chose as long as its within the limits of its opening. You don't want to put something too small or else it won't be noticed, but something too big will just looked like you crammed it in. If you are unsure what size of vases to choose, buy a bunch of cheap ones of varying sizes so you can try out your decorative skills with each. Once you find that perfect combination, then go out and purchase the more expensive kind. OH! As a rule, never purchase vases which originally held plants. They leave such a dirty mess on the inside and you don't want to get that on the accessories you are putting inside. If you do choose to use old plant vases, then be sure to wash them out thoroughly before use.

So as you can see, I am quite thorough in my work and I have covered all aspects of the interior design for the new Iron Warrior Office. My next steps in my design endeavor will to receive approval of the design from the Advisory Board. They will definitely be much harder to convince this time, but they don't really know what they are looking for. I can see right through them and know that its my design they want all along. But until then, I shall continue to work on my paint brush handling just in case I need a little more justification. Bye bye darling!

Leaving Your Mark



THE CREEPY GRAD

Are you done your five to seven years here at the University of Waterloo and don't feel as if you've reaped the full benefits of undergrad? Do you feel that you haven't quite left your mark on the students who have once called you an upper year? Did you notice the new batch of strange faces when you set foot on campus for the first time in years? Are you still reading The Tin Soldier because you still want to learn about the latest things that engineering students nowadays do for fun? If you still have your WatCard handy and if it hasn't expired yet because you "lost" your WatCard and got a new one right before you graduated with a different expiry date, why not take advantage of the ever-expanding student space and leave your mark on the students? In this article, I'll be talking about how to leave your mark on the students of today.

The first thing you need to do is to visit an engineering event. Remember your last OT as an undergrad and realized how old you were when you weren't able to recognize anyone? Don't let that stop you! Not a current student? Hopefully one or two students in the crowd recognize you from somewhere, and hopefully you can use them as people you can hang out with until you get into the event. Once you're in, you're gold! Look around for some free food! Find some new friends, preferably first or second year students

who you've never met because you're too old to even realize that they were in grade school while you were in first year. Win them over and impress them by touching The Tool once it makes its appearance. Don't you look super cool showing off your scratched up piece of hardware? Yeah you do!

Now that you've met the new bunch of first and second years, try to find out where the house parties are. Either someone will tell you, or you can sneak up on some of them and listen in on their conversations. Once you show up to the party, say you're a Geological engineer. As the program with the smallest number of students in every year, the people at the party won't doubt that fact at all. Unless you meet that one Geo student, in which case try to avoid them. They'll blow your cover. If you do get ousted as that "creepy older guy/girl" at the party, just flaunt your iron

ring. Those undergrads will be instantly captivated, and they'll forget why a grad has shown up to their first year party.

Last but not least, bring a camera and take lots of pictures. Upload each and everyone of those photos to Facebook - don't filter out pure gold! Hopefully those students you met that got you into the party in the first place added you on Facebook, as they'll start tagging everyone who was at that party. Soon, you'll have a new batch of friends on Facebook, and a good start to being in the know of how to be as cool as the cool kids in their class.

Simple as that! There are many ways to leave your mark on the new students, even after you're done school. I left out some details of other things you can do at that party, but I'm pretty sure you'll find that one person at the party that really wants to check out your ring!



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Show all your new friends your ring! Let them try it on!

THE TIN SOLDIER

Colour Coordination is Required

Trifecta of Fabulous-ness
Tatar Sause

Fashionable Subordinates
Master Chief
The Second Coming of Roy Lee

Ridiculously Good-Looking
Noj Footknee
Tanya Montana
Miz Taken

He's So Hot Right Now!
Fat Patricia

We're Both Gemini Vegetarians
The Second Coming of Roy Lee
Miz Taken
!Velociraptor

Aca-scuse Me?
Tanya Montana
She has gills like a fish

I Set Fires to Feel Joy
Anderson Cooper
Apple Jacks

We're Starved and We're Armed
Kurt Von Nugget
#Grandmaseeseverything
I R Needless
Dan Drieburg
Tanya Montana
Spank the Monkey
The Attorney
Apple Jacks
Richard Nixon

Get in Loser, We're Going Shopping
Cherry Popper
Calgary Flamer
MC Chyneh Whyte
Salty
Sadie and Massy
VP Spellcasting
Pavel Pantzlov
Tupac Resurrected
Yasser's Cardboard Cut-out

He Ate His Twin in The Womb
The Second Coming of Roy Lee

Soul-less Spawn of the Devil
Ginger Snaps

Feel the Fat Power!
Boob Cilantro
Bitches be Karma

Sisters Before Misters
VP Spellcasting
The Young 'Uns

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Mail should be addressed to PJ Katie, c/o YTV Canada, P.O.Box 7500, Paris, Ontario, N2L 3W7. We do not currently have a phone, however you may redirect all inquiries to Kickoff's, as we're likely there. We don't have a fax number as no one uses faxes anymore.

Point vs. Counterpoint

Is Jennifer Lawrence more attractive than Emma Watson?

POINT

DAN DREIBERG
3Z HANDSOMENESS

Emma Watson: although widely known for her outspoken and incendiary attacks on religion in such works as “The God Delusion”, she is perhaps best known as Hermione Granger. And what a legacy that is: the *Harry Potter* franchise has enjoyed honours the world over boasting fans of all age groups despite being billed as a children’s series. But let us take a step back and see if all the hullabaloo is really warranted.

Harry Potter is a great book for the same reason that Rage Comics were funny, or why Buddy Holly frames were cool again: it’s easy, simple, and everyone else likes it. If I had a nickel for every time *Twilight* was mocked by comparing it to the “vastly superior” *Harry Potter*, I’d have enough to pay Alan Rickman to read me the phonebook. *Harry Potter* provides such brilliant and revolutionary insights as “love conquers all”, “believe in yourself”, and “don’t follow people, follow ideas” (okay, I liked the last one). For a series in which combatting prejudice is a major theme, it is ironic that J.K.’s rainbow of ethnic characters could make Black Dynamite blush: Cho Chang the shy Asian girl; Seamus Finnegan the short-tempered and eager-to-fight Irishman; Victor Krum the dark and stoic Eastern European; Fleur Delacour the flirtatious and feminine French girl; and Parvati and Padma Patel the South-Asian sisters who, while all the other wizards get to wear whimsically wizardy dress-robos, wear saris. And what of House Elves? It feels that throughout the series Rowling sets up the plight of house-elves to be analogous of that to slavery, including the notion that that most wizards think that the elves are better off with masters. Does Hermione manage

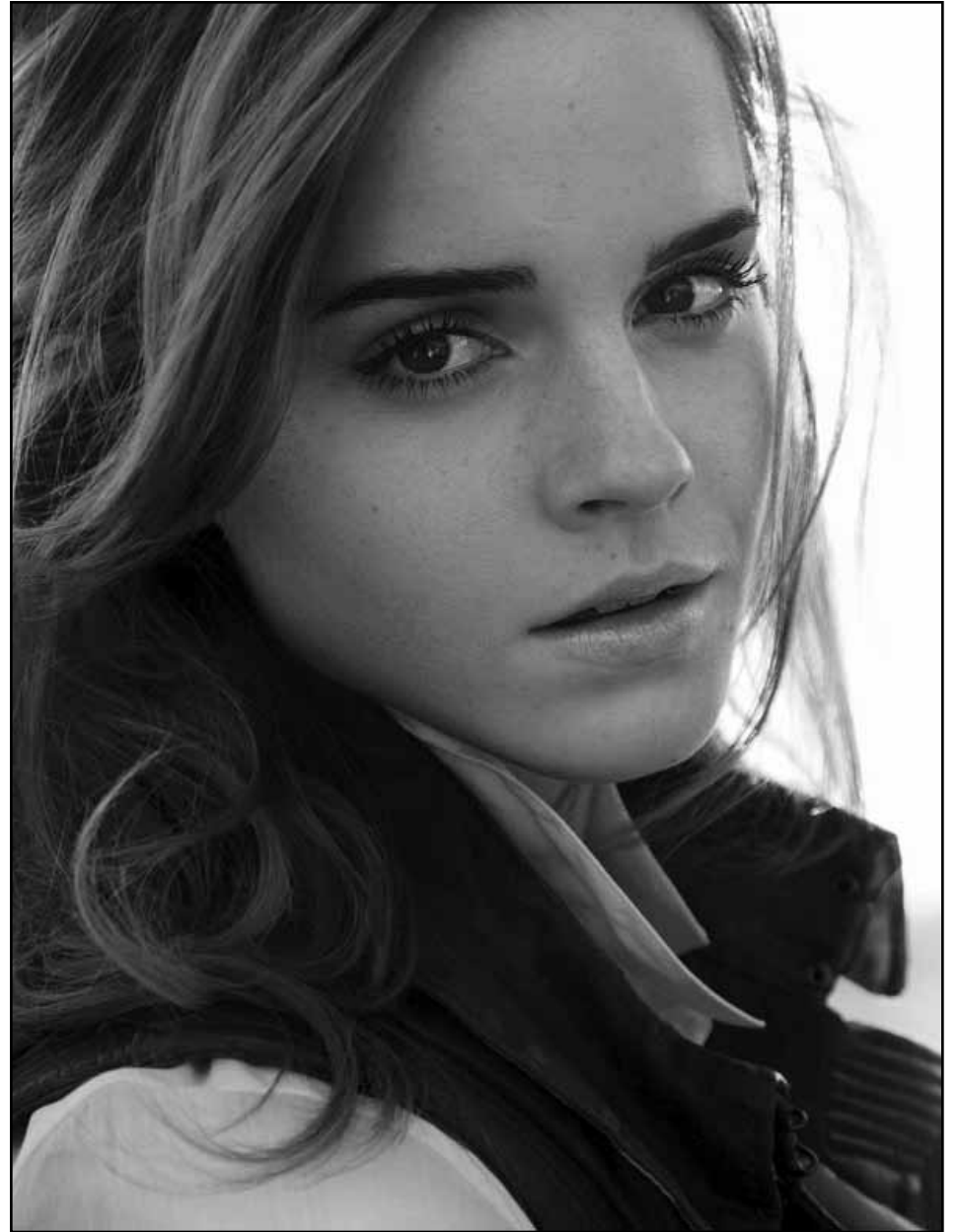
to free the elves or change the perspective of the Wizarding community? No; instead the message seems to be “just don’t be a jerk to your slaves,” with the last sentence in the series being Harry wondering if Kreacher would make him a sandwich, reminiscent of the horrendous post-civil-war myth of “the faithful slave”. Now, this is not counting the epilogue which is so ham-handed and oversaturated with offensively obtuse references, it is a wonder if J.K. Rowling had sneezed into the napkins on which she was writing it and just handed that to her editors. There are so many winks and nods and nudges that you would think that she were having an epileptic fit.

Now, this isn’t to say that the rest of the series was exactly a literary treasure. As opposed to a well thought-out fantasy series with a set and faithfully observed mythology, canon, and law, *Harry Potter* reads like a game of imagination-play between toddlers, or *Dragonball Z*, where one minute something is “the best attack ever” and the next there is an “even more the best attack ever”! Isn’t it peculiar that the dark wizards in the first books are almost exclusively employing spells learned by eleven and twelve-year-olds (until, of course, our protagonists learn new spells which the dark wizards then seem to just recall)? Or that the Patronus charm, which was supposed to be only mastered by the greatest of wizards, could be taught to pretty much any teenager? And the whole debacle of time tuners need really not be explained in depth (the only reasonable use for such powerful magic is balancing a thirteen-year-old’s school schedule!) And Harry’s whole dying-but-not-dying at the end? Making something nonsensical is not a shortcut to depth!

In conclusion, Jennifer Lawrence is exceptionally beautiful.

APPLE JACKS
YEAR 3 SLYTHERIN

COUNTERPOINT



Checkmate, JLaw.

Point vs. Counterpoint (Just Cause...)

POINT

MIZ TAKEN
RED EYES BLACK DRAGON

What could be better than a PCP? Nothing, that’s what! PCP can be absorbed in so many ways to feed the psyche. One might say that you could mash it up and stick it in a stew of other eyebrow-raising topics of discussion. Hey, we might as well add a dash of PCP dust into our everyday conversation. You and I both know that sprinkling some of this point-counterpoint goodness into your Wednesday is what separates “what” in WTF and hump day. In fact, why don’t you spray some of that good stuff on a good old Canadian maple leaf, roll it up, and inhale that saucy fusion of unique perspective.

Let’s throw a puppy in the mix. Wouldn’t you want your puppy to be in a state of perpetual bliss as it sees itself finally catching

PCPs Are Good For You (Just Like Vitamins)

his own tail with its waking eyes? Even more so when, in actuality, his tail is too small (stubbly, more like) and impossible to physically catch? What’s good enough for your puppy is good enough for you too, right? Let’s take a ‘dip’ into the peaceful opinion that is the point-counterpoint. As a Canadian, you’re used to the numbness in your extremities that the cold gives you; in fact, you probably enjoy it now as it reminds you of how uniquely Canadian you really are. What makes a PCP such a welcome administration into your being is how well it fits and understands the student mind. As an engineer, your dose of PCP will re-enact those skewed feelings of body image, paranoia, and depersonalization that was so prevalent during high school. Wouldn’t you, as an old soul, want to relive the good old days?

Now, after talking about PCPs, it seems

Editor’s Note:

Miz Taken cannot write the other perspective for this topic as she’s busy rebooting herself using her bellybutton.

like I need a good shot of it right now as to get me through writing all the things bad about PCP (of which there are none). Here we go... reading about iClickers and how relevant they are to our education makes me think of laser pointers. Laser pointers being pointed at things are the reason why I made a deal with Jupiter to ensure my future as a girl (and not a boy) in engineering. The iClicker: my own laser pointer I can press in class that has zero chance of blinding people. I go PEW PEW with my laser iClicker because I’m Luke’s German father and am allowed to use lasers. Hey! If I take my puppy (who has a small tail) and point the

iClicker at his tail, would he catch it now? Mind blown! I collect lasers like I collect rainbows. I can make a double rainbow with my lasers. If I ask Jupiter nicely, will he turn me into My Little Pony? No, my fish friend says I can’t be a pony because I can’t swim. I know! I’ll be a unicorn. I’ll attach the lasers to my horn and fire rainbows out of them! I want Skittles now. I’ve found my true calling! I’ll be the unicorn that fires Skittles like machine guns on the world much like Hades fired Pain and Panic. I don’t feel pain. I’m numb. Ha! Those bubbles look like Smurfette being really mad when Smurf lied about using a condom.

Man in Frankenstein Mask Apprehended

TANYA MONTANA
3A GANGSTA

A 25 year old man from Geneva was arrested after a bout of bizarre atmospheric activity.

The incident began at midnight, when police received a grunty call reporting mysterious lightning above the farmhouse on the University of Waterloo

North Campus. The area is popular with entrepreneurs, amorous sheep, and lost frosh. The grunty caller also offered a description of a suspicious vehicle nearby.

The farmhouse was deserted when the police arrived, except for several van der Graff generators and a lingering scent of old blood.

The suspect was later spotted in front of the Student Life Centre, and arrested

at gunpoint. When officers searched his vehicle, they found an assortment of scalpels, syringes, and stained bandages. These items were seized by police.

The man told investigators he was using the scalpels and syringes for surgical practice, as he was a doctor. The bandages, he insisted, were a coincidence and something he hadn’t gotten around to throwing out. When asked why he had

been in the North Campus, he claimed that he had been studying the geese. The suspect retained a melancholic and cooperative demeanour during the interrogation.

The suspect was detained overnight at his own request, and released in the morning. He faces charges of practising necromantic medicine without a licence and literary misallusion.

Waterloo Engineering Society Moving to Wilfrid Laurier University



I R NEEDLESS
BLONDE BABE STUDIES

The Waterloo Engineering Society has taken Society improvements to a whole new level. This past week, an agreement was signed between the Society and Wilfrid Laurier University to move all EngSoc-affiliated events, services, and representation to the Laurier campus. By this time next year, the Orifice, POETS, and the Engineering C&D will be found approximately 1.5 km further east from their usual locations. Laurier has even offered to provide a bus to use as a shuttle between classes at Waterloo and the new EngSoc space. Thanks to the genius idea from the thoughtful Cam Winterink, the bus plans to make multiple stops around Ring Road before making its way to Laurier.

The Waterloo Engineering Society will be installed in the third floor offices of the Fred Nichols Campus Centre, directly above the pub affectionately

known as Wilf's. In preparation for this move, Laurier will be modifying their beloved Golden Hawk floor art to be carrying The Tool.

Executives and directors expect Society events to rocket in popularity and quality by introducing them to a more exciting party-focused audience. "I'm really excited to have students with actual non-academic talent come out to our future events," gushed TalEng director Alessia Danelon. "There are only so many quiet introverts playing soft piano or singing jazz music we can listen to before our audience finds it a

little tiring. We are looking forward to hearing more songs honouring the bro and how great the last football game was."

PubCrawl director

Kent Stoltz is also eager to reap the benefits of introducing EngSoc events to Laurier. "Our past PubCrawls have been pretty busy, but like most of our socials, there is a lot of comfortable chatting and weak dancing. We think that by bringing

PubCrawl closer to Laurier,

we can have a lot more guys rip off their shirts in a fit of manhood, tell each other they are so happy to be with their dude-

bro and how that chick they banged last night was totally so hot. We really think there's an opportunity to make this a more open and welcoming environment."

There is a more mixed opinion from the Laurier student body, who are wondering what kind of changes the Waterloo Engineering Society will bring to their culture. One student showed emotions closer to confusion than interest in the change. "Man, I was just like, so confused because these like, math people want to come over and party and get shit fucked and I was just thinking like, I thought they just played StarCraft and sat in libraries and shit." Another was more optimistic, "maybe, like, they could fix my car and shit... Engine is[sic] in engineer, right?"

Though the change is a drastic one, it is being welcomed by the UW Engineering Society with open arms. The grand unveiling of the new EngSoc space and the shuttle service will start with EngSoc's kickoff event "The Ring Road Grand Prix Classic". Details will be announced within the next few months.



Waterloo Engineering Sex Party: You're Invited!



TANYA MONTANA
3A COMPENSATING
VP INTERNAL AFFAIRS

Heyyyyy sexy people!

After the success of the University of Toronto Sexual Awareness Week kickoff party (a.k.a. EPIC SEX CLUB ADVENTURE), the Engineering Society at the University of Waterloo will be hosting OUR VERY OWN SEX PARTY TOO!

UoT showed us that they can study and swing at the same time. Well, we can do anything that they can do. Except harder! Faster! Better! Stronger! So

we will be using the entire engineering complex in South Campus to accommodate all 8300 students in Waterloo Engineering. We have more machines than the Kink Armoury and once the mechs manufacture a few post-market attachments we'll be good to go. Sign up for AutoCad and 3D printing workshops outside the Orifice.

Some might ask whether or not the the gender imbalance of Waterloo Engineering might throw a damper on things. WELL a sausage party is the best party. Do you know what's better than a hot dog with one sausage? A hot dog with two sausages. Three sausages. Sausages without buns. Buns. Buns buns buns

buns. Buns are good too. Om nom nom. With enough ketchup and condiments anything is possible.

If the gender imbalance is still a problem for you, well Laurier is next door, and I know for a fact that they're not hosting an awesome sex party, LIKE US. We held TalEng there so they should now be fully aware of the extensive and unusual skills that us engineers have. It's only fair that we invite some similarly talented Laurier students to our sex party, which will be better than the Laurier orgy, and at least three inches better than the UT orgy.

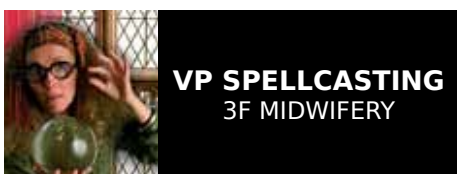
What is a problem is that we will need a lot of condoms and cleaning supplies

required for this venture. In the spirit of DUSTED why not BOASTED? Buy Out A Small Town Establishment Dispensary. T-shirts will be on sale in CPH next week for our condom-and-bleach extravaganza.

I think all the purple paint shenanigans, turfed-POETS, and beached-POETS have proven that we're not shy about flying our freak flag. If you have any doubt about this, our mascot is the awe-inspiring 60-inch Tool. One of our frosh cheers is "EDCOM MAKES US WET." And oh yes, they do... EDCOM will be in attendance to keep the peace... and reprimand offenders, as it were.

See y'all there after exams ;D

Exclusive Interview with Upcoming Supermodel: Megan McNeil



VP SPELLCASTING
3F MIDWIFERY

After a brief stint with UW Retail Service's Leather Jacket ad campaign, Megan McNeil, or as she likes to be called, "Mé-ganne", has decided to pursue a supermodeling career. She is best known for her "Magnum" look, which is her own take on the "Magnum" look by Derek Zoolander, her mentor.

We managed to track down Ms. McNeil to answer some of the burning questions that have been on everyone's mind.

Q: Did you always want to be a model?

A: Funny you ask! When I came into Engineering, I thought it was mostly about modelling. See, there are many courses about systems modeling... CAD modeling... You know, that stuff. So I guess, yes. I did always want to be a model.

Q: How did you get into modelling?

A: Well, it's a funny story, really. I've always been passionate about fashion and

giving advice to everyone, but I was finally noticed last month by the devilishly handsome Yasser Al-Khder in the C&D. He noticed my proper use of leggings as I filled up my mug with tea, and all I heard was "DAYUMMM GIRL, THE BACK O' YO LEGS IS RIDICULOUS". And he told me there was nobody else he could imagine beside him in the Leather Jacket ad campaign. That's when I knew I was meant for this.

Q: What are you afraid of?

A: It's funny, really. The thing I'm most afraid of is the murder of cute, innocent animals for the enjoyment of humans. I know it sounds ridiculous considering my modeling career started with a Leather Jacket ad, but there are exceptions to every rule. Like how leggings can sometimes be considered as pants. BUT ONLY SOMETIMES.

Q: Who do you consider your style icon?

A: Oooh, that's a tough one... Although I've always been a big fan of Honey Boo Boo, I've gotta give it to Kate Upton. THAT GIRL HAS GOT IT GOIN' ON IN ALL THE RIGHT PLACES. I've even put my face on her Sports Illustrated cover as inspiration.



Megan's classic "Magnum" look doing its work.

VPs Leave Engineering to Pursue Fashion Career

**#GRANDMASEEVERYTHING
 UGGS ARE PRETTY**

Again, we were not quick enough; another set of VPs have ridden the unicorn's back into the rainbow-filled distance. Like before, our VP External and VP Internal have decided to leave Waterloo to pursue a new career in spreading the fashion word.

While they refused to say more about their current mission, recent sightings by #auntynowbetter say that they're crusading for harem pants, short shorts for men, and the ever-popular, socks and sandals. Before making their departure, they were often heard saying, "a career in engineering is as ill-fitting to me as mommy jeans."

Due to this sudden departure of another

set of VPs, Jon Martin, CRO extraordinaire, has vowed to never leave Waterloo. His crusade to bring them back by committing fashion blasphemy (like donning Bjork's swan or wearing neon-colored tracksuits) have all been in vain. He says that "his work will never be complete until he can ensure that ratifications will only happen once a term." Unfortunately

for him, there has been no response to his endeavours as "his majestic beard helps him pull of any look he chooses to show off." As a third party just weighing in on the matter, #auntynowbetter has released the following statement: "Jon, you are out of luck with these girls and you will stay at Waterloo forever. So much for the seven-year rule."

Fairytaile Villians are Pissed (and Rightfully so) As they Bear Centuries of Defamation



**THE ATTORNEY
 LAW MAINTENANCE**

Once upon a time, in a land really REALLY far away, there lived fairy tale creatures that were pissed at everyone bullying them and giving them death threats. They were so peeved that they decided to file a class action lawsuit against all humanity. Their accusations against the defendant (being all of humanity) ranged from libel to missed royalties from the recent influx of fairytale adaptations.

First of all, the wicked stepsisters are suing for prolonged punishment as their eyes were pecked out as a result of trying to fulfill their own fairytale dream of marrying to better their lives. They further insinuate that it's their mother who is truly to blame, as she is the one who squandered the family's money. In fact, it is their mother who had brainwashed them since the age of 3 to hate Cinderella on principle. Video testimony gives evidence that the stepsisters were fed two cookies every time they tripped, name-called, or even took unflattering pictures of Cinderella and posted them on the pigeon-carrying wagons. The strongest pieces of evidence found to aid their

cause was the fact that their eyes were pecked out by birds, and that they were forced to work as servants in Cinderella's castle.

The Beast (from *Beauty and the Beast*) has also joined this suit with the intention of clearing the misconception that Belle was a victim of Stockholm Syndrome. In actuality, Beauty came to the Beast's castle willingly and the pair actually got along well from the get-go. In fact, the Beast gave her her freedom immediately after imprisoning her, but she chose not to use it. Who can blame Belle when her family is quite useless? It's not like Belle wanted to see them...she was just being the good daughter she was and paying the price for her father's stupidity; after that, she didn't actually give a shit about them. For this reason, the Beast is not a guy who manipulated his way into winning Belle's heart.

The sea witch, Ursula, also has a fishbone to pick with Ariel. She's suing Ariel (who's an angel for no reason now) for breach of contract. Ursula claims that it's not her fault that there is a certain give-and-take that is required to grant people's wishes. It's not as if she decided to turn away Ariel's quest for true love. In fact, when Ariel fails to make an impact on the prince, the sisters give up all their hair to save Ariel's life as she is doomed to die. Instead of thinking of her sisters' wellbe-

ings and mermaid-pattern baldness, she decides to jump off the boat. Not only does she fail to hold up her end of the bargain, the sisters now have to live with no hair for the rest of their lives. Who's going to marry them now? On the other hand, Ariel, who is unable to think of others, becomes an angel after she jumps off. I must say, this scenario is much like a teenage girl obsessing over Biebs.

Maleficent, as of now, has decided to join this lawsuit, in an effort to correct the image currently present in media. She claims that she's not the real villain in this story because the Prince and his family are the actual douchebags in this instance. Can you blame Maleficent for being majorly peeved if the ENTIRE kingdom is invited and she is shunned? She doesn't even have fellow shunned-ones to interact with! Sleeping Beauty's state can be entirely pinned on the Prince because he failed to save her as soon as he could, as he was busy raping and impregnating her while she slept. Imagine your surprise if you woke up to find that your body is mangled for popping two kids without consent...who's really the bad guy here?

The next steps include consulting other creatures like the Giant and the Pied Piper for any grievances that they may (or should have) against humanity. Who can blame these guys for going with their



asnek.com

Disney villains file class action lawsuit against all humanity

nature? The estimated amount that the fairytale creatures are willing to settle for is over a hundred million gold pieces; which may come from profits spawned from the various reboots in movies...but let's be honest, that's not going to happen.

[Spoiler][Spoiler][Spoiler]:

The Newest Scoop on Game of [Spoilers]



**KURT VON NUGGET
 5S MEATCLEAVING**

With season three of HBO's hit series, *Game of Thrones* fast approaching, many fans are knotting their underpants with excitement over what could be in store for their favourite characters. Luckily, here at *The Tin Soldier*, we have some very impressive and important connections with people who know people who maybe read one or two of the books a while back, and so we are able to give those eager beavers out there a sneak peek at who exactly is going to die and/or get horribly scarred.

Everything starts with Theon Greyjoy, the guy who was once bros with Robb Stark, and disappeared unexpectedly during the season finale. We discover that his abduction was ordered by his four uncles-- Balun, Balin, Dwalin and Dorothy-- to give him all of the name days (a Westerosi term that loosely translates to just about and rather roughly 'birthdays') that Eddard Stark did not, thus allowing him to become a man and making him take responsibilities for his actions. He goes back to Robb, apologizes for roasting his hometown, and they become instant buds again.

Having his bed bud forever come back starts a chain reaction in Robb's motivation, putting a new spring into his step that ends in him becoming an unstoppable force of pure northern rage. He remembers that he has something his enemies do not: a gigantic direwolf that has strong enough jaws to rip everyone's head clean off. He uses this to his advantage, striking fear into the hearts of all his enemies and claiming the north as his to rule.

The one most damaged in his new ruthless mannerisms is Stannis Baratheon, whose life turns an even grosser shade of brown than before after nearly all of his followers are either slain by Robb Stark's men or abandon his strife because they realize he can't win (and also kind of smells funny). Even that one weird Red Woman who killed his brother for him (what a sweet gal) leaves him, giving herself to Robb Stark. The young King sees that she's totally hot-- in more than one sense of the word-- and forgets once again that he kind of pledged himself to another woman and decides to take her for his queen. Obviously, his ex isn't too happy with the decision at all, but as soon as she complains about how out-of-character it is for him, the direwolf Greywind eats her face, drowning out anything coherent she had tried to say.

Of course, everyone is dying to know

what's going to happen to that sweet-looking dragon lady, Daynearis. Well, don't you worry-- HBO has you covered! Her dragon-children have grown big-- and when by big we actually mean about the size of a newborn lamb. Still, that's eight pounds of fire-breathing badassery that deserves to be voiced by Eddie Murphy, and that's exactly the sort of intimidation that Danarius needs to get herself closer to the iron throne. Except even she cannot do it alone.

It is at this point that she decides go north of the Wall, up to everyone's favourite bastard making buddies with the free folk. Last season, Jon Snow had to betray his brothers of the Night's Watch, planning only to do so for a short time, but during his vacation he ends up realizing that the ridiculous rules aren't really his style, and so decides to stick with the free folk. However, he is just starting to adapt to his new life, when Dénérees shows up and answers the question everyone has been asking: who is his mother? The answer: Dunayris' mother! The two are actually siblings, but since this isn't Star Wars, they decide to get married in a typical Targaryen fashion, and decide to become king and queen of the true north (eat your heart out Robb).

Meanwhile, in King's Landing, everything continues to fall apart with the

internal struggles amongst King Joffrey and his council. As soon as Cersei finds out that everyone likes Tyrion better than her, she transforms into an ugly witch and decides to poison him with an apple as red as blood (she said it was laced with Dornish wine so he didn't think it was suspicious). The poor dwarf had no chance of survival, and met his untimely end just in time for the wedding between Joffrey and the gay knight's sister. Unfortunately for her, though, Joffrey forgets how to play nicely and accidentally kills her while they dance during the wedding ceremonies. However, since no one was interested in trying to find another girl willing to be his queen, they simply reanimate her corpse with some magic and everyone pretends that she's just a little less talkative than usual, keeping both the Lannisters and the Tyrells happy (whoever they are).

All of this, and much much much much much more is waiting in store for the third season! Other highlights include the results of Sansa placing her fate in Littlefinger's hands (which involves brothels), Bran and Rickon getting lost in some never-ending woods until they are turned into Stalchidren, and Tywin Lannister constantly commenting on the rain in some place called Castomere. Many laughs are in store!

Gaming in the Future: Micro So Tendo



MASTER CHIEF
4TH GEN
GAME-INEERING

GAMING OF THE FUTURE

So, the biggest change in the video game industry has finally happened – the complete co-operation of Microsoft, Sony, and Nintendo gaming divisions to produce the newest console that is sure to squash all competition. Of course, there isn't any competition as they now have a complete monopoly on the living room console, but that is beside the point.

So how did this amazing merger come about? Well it seems that each of the big three realized that by competing with each other they were really alienating a large potential market. By making people choose between an Xbox, Playstation, or Wii (insert funny sounding name that no one knows how to pronounce until Nintendo tells us, then we just keep mispronouncing it because it is funny) they are leaving behind a large portion of the market that would buy their games if they had access to all of the consoles. Of course this benefits the consumer as well, as all the developers will now be making a single game optimized for the single console. But what how will the console work? Here is my best guess based on which company takes the lead on development:

Sony: The console will be called the Playstation 5X; it is based off of new nano-

robots which work cooperatively using a hive mind (codenamed "Skynet") – no one knows how to program it and the operators have claimed the development console is telling them to turn over control of their lives, but that is just a rumor. The system will feature motion control using the new Move 2.0 controllers combined with Kinect 2.0, and many motion based peripherals, the MoveBook, MoveCouch (for sensing how your ADHD is impacting your fidgeting and automatically switching to a new game to keep your attention). Each peripheral will of course be sold separately and certain games will require four or five of each. Additionally the console will contain the newest disc based media storage system, Purple-Ray, no one else supports or uses the standard, and it will double the price of the console at launch, but it sounds really cool doesn't it?

Expected Games: Soldiers in Space, Soldiers in a Desert, Post-apocalyptic World Soldiers, Japanese Space RPG, Japanese Desert RPG, Japanese Post-Apocalyptic RPG, Zombies in Space, Desert Zombies, Post-Apocalyptic Zombies (this one seems a bit redundant to me, but I'm sure it will be a great seller).

Microsoft: The new console will be called the PSBox, and will be based off of tried and true PC style architecture and parts – so it will be obsolete within 3 years just like your regular PC, but its projected life-cycle is approximately 15 years. The new Kinect 2.0 camera is now combined with a pair of very thin gloves with an Iron Man style tracking light in the palm and individual motion



kotaku.com

Sony, Microsoft and Nintendo team up to make super system Micro So Tendo.

tracking of each finger for fine motor control in games. The system is rumored to be sticking with standard DVD, so most games will be shipped in Special Edition style cases, not for collectible purposes but because the game is on 25 discs.

Expected Games: Kinect Dogs 35, Kinect On Rails Shooter, Kinect On Rails Rafting, Kinect On Rails Crappy Star Wars 7 Tie-In, Arcade Monopoly, Arcade Risk, Arcade Russian Roulette (This probably takes away some of the suspense – just a guess).

Nintendo: Nintendo was too busy making Pokemon 45A and B (they ran out of designations after running through the Hebrew Alphabet, the Military Phonetic Alphabet, and the Periodic Table of Elements – Pokemon Uninpentium/Uninseptium were a personal favourite of mine) that they forgot to start development on the new console. But, luckily, they were at yoga last week and came up with the idea of a motion tracking, touch sensitive ball that will now be used for all their games. Buttons will be displayed on the surface of the ball for some games, while others will rely on the gyroscope inside. The ball itself is about four inches in diameter and made of soft rubber, so when it slips out of your hand, it will bounce harmlessly off your TV. The console itself is going to use the recycled parts from all the PS3s and Xbox 360s that people threw away when the PS4 and Xbox 720 came out. The marketing team hasn't come up with a name yet, but they are leaning towards Nitwit, Blubber, Oddment, or Tweak.

Expected Games: Nintendogs 22, Nintendo Cats 13, Nintendo Rodents 2, Nintendo Birds 8, Nintendo Reptiles and Amphibians 4, Mario Party 15, Super Mario 8, Zelda 22,

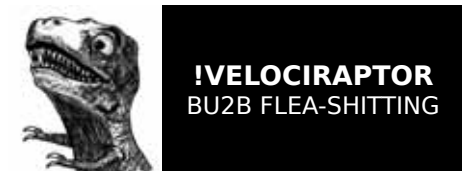
and of course, Pokemon 3D (they finally realized that this would be the number one best-selling game they will ever make).

That is basically all the news we have right now, but it raises some interesting questions – will we ever see the mobile market merge as well? Will Google and Apple ever team up to create a single operating system capable of completely enslaving all of humanity? Well, unfortunately, if Google and Apple ever teamed up the Apple legal department would probably see the new phone and file a lawsuit before realizing it was actually an endorsed Apple product. Then they would be in a tough situation of suing themselves for copyright infringement. Of course the rapture would probably start with the resurrection of Steve Jobs and the spiritual rescue of all those who truly believe in the Cult of Apple.

Oh yeah, I forgot to talk about price of that Sony-Microsoft-Nintendo console; that is also a little up in the air. If Sony takes the lead it will cost only three low low payments of \$399.99, plus \$199.99 for each peripheral. If Microsoft is leading it will be \$500 and will come with all the required products inside, unless you want to add a couple of gloves for \$50 each. Of course if Nintendo leads development the system will cost \$300 and optional slip cases, ice cream cone style handles, tennis racket, fishing rod, sword, gun, and driving wheel attachments will sell for \$20 each.

So that is it for this edition, and could be the end of the gaming world as we know it, especially once our consoles enslave us – but that won't happen for another 12 years, 3 months, 14 days, and 12 hours – so we've all got plenty of time for gaming till then.

The Bible



IVELOCIRAPTOR
BU2B FLEA-SHITTING

Hear Ye, Hear Ye, welcome to thy Long Long Review. 'Tis a wondrous column wherst I review thy favourite long tale with an outrageous word count. The tale of th'week is the most magnificent of tales. The most glorious of adventures! The Bible...

Hey, Mr. Editor here *waves*. As you can probably see this is going to be a horrendous and probably offensive mess. This is especially apparent to those of you who

read the last edition of the Long Long Review (Seriously, who talks about a 3 word poem for 1200 words). But that's besides the point. After talking with the last term's EIC who is still upset over the "poke funning of" and the lion joke, we've decided to cut out all the terribly long and boring parts of this column and just skip right to the ending. And no this was not a play on the Princess Bride. Sooooo, back to the column!

As you can see 'tis a wondrous read detailing the story of yesteryears. For ye next version of thine column I shall discuss the difference between all the books called "The Road".

Mr. Editor again *waves*. See? Wasn't that much better? Anyway, toodle doo!



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Ethel's Hipster Poetry Nook



Welcome, my friends. Have a seat. Grab a coffee. Relax. Adjust your berets and put on your best snappin' fingers, because today we have a very special treat for you. Yes, here in Ethel's Hipster Poetry Nook, where the cool cats sip hot coffee you've never heard of with the most obscure artists of our time whose names you can't pronounce, we bring you only the finest of beat poetry. We travel far around the world to bring you the words that will shape the very day you hear them only to be dashed upon the hopes of tomorrow as we open palm slap yesterday. So my friends, close your eyes, open your mind, and snap ya fingaz to the smooth wordsmithing of MC Chyneh Whyhte!

(Editors note: You should be snapping now. No, we don't care who's around you. Snap. Now. Also, through the magic of words, you should be picturing all of this in your head, so imagine that a new man steps forward to the imaginary microphone.)

Hello through the blogosphere, beautiful lovers of acoustic voice imagery. Allow me to introduce my latest creation from my atmosphere of hip creative juices. You see, being a beat poet and lover of all things artistic takes me to strange lands, lands you may have never heard of to hear and see art that you'll probably never hear of either. One such land is the far-off island of mainland China. This densely populated mainland island is a hub of creative inspiration, as the very system of logic you take for granted is widely non-existent. You see, my dear spiced-chai-machiato-orange-frap-sipping friends, it's not that China particularly does anything WRONG, but rather that the line of thinking typically seen on Mainland China is completely unfathomable to our way of doing things. And so, from this, I present to you: Because China. Please, begin snapping now.

(Editors note: Do it.)

**Drunkenly, I stumble.
The streets are heavy with parties.
It is Saturday.
Iron Man gets into a taxi.**

Why? Because China.

**I order creme brulee.
The waitress brings me pudding.
I harden it with a laser.**

Why? Because China.

**I awake naked on the floor,
covered loosely in a terry cloth robe.
The sounds of the doorbell push out
drunken shame to fill my pulsing head.
My butler enters the room, apologizes,
and continues cleaning the room.
He cares not that I am
sleeping under the sink.**

Why? Because China.

**The back of a car on a
crowded highway,
I work from the back seat. My driver
watches Beyonce's documentary.
He reads the Chinese sub-
titles. He is driving.**

Why? Because China.

**We speed down the highway,
suddenly devoid of traffic.
I wonder aloud (for he cannot under-
stand) how our
driver found this windfall.
We are on the sidewalk.**

Why? Because China.

**In a restaurant, I swing from
the rope swing chairs.**

**I order deep fried squid
from the cute waitress.
My food arrives, served
by a clown on stilts.**

I am in a fancy restaurant.

Why? Because China.

Peace.

(Editors note: At this point, he dropped the mic and walked out, flashing a peace sign over his head.)



Because China

Home of the Molemen: Chernobyl, Ukraine



#destroyerofworlds

When it comes to interesting places, I wholeheartedly believe Russia owns the largest share. I mean, where do you even start? There's Tunguska, the site of a meteor impact that released more energy than a thousand atomic bombs. There's the whole of Siberia, where you can witness the majestic sight of the elite Bear Cavalry in training, clearly superior to every other military force on the planet. Seriously, they're BEARS. If it wasn't for the fact that they cannot fight anywhere south of the Arctic Circle, the USSR would have won the Cold War by 1938 and we'd all be living in a worker's paradise. It even has Moscow, which is one of the only cities that claim the distinction of burned-to-the-ground. (This is not blatant advertising for my column in that OTHER paper, the Iron Warrior, which happens to be on Moscow this week).

It makes sense that Russia has the largest number of attractions in the world. After all, it is the largest country in the world. However, Russia's star attraction is clearly Chernobyl. Sorry, what's that? Chernobyl is in the Ukraine? Oh, my mistake. You see, a recent investigation into the 2011 Russian elections revealed that the Communists had actually won the election, and not Prime Minister/President Putin, as had been believed. Clearly, this report shows that in the near future, the Soviet Union will be reborn, and will swallow up all the Eastern European countries. Therefore, I am right; I am merely seven years ahead of schedule.

Anyway, back to Chernobyl. Everyone knows that the Cold War wasn't really a war. It was more a contest. A contest of love. Both America and the Soviet Union fell in love with Nuclear in the summer of 1945. But only one of them could have her. So, the next 45 years can basically be told as a cliché love triangle amplified to a global scale. And in the end, America won out. The USA, or as the locals

call it, 'MURIKA!', went on to become a nation of bankers, financial disasters, and McDonald's, while the USSR never could get over his loss. Nuclear left a metaphorical hole in his metaphorical heart, because, well, countries don't have hearts. Well, it's not really metaphorical. It's a pretty real hole. That hole is called Chernobyl. The heart is definitely a metaphor though.

The Chernobyl power plant exploded in 1986. It is one of only two events classified as a Level 7, the highest level, on the International Nuclear Event Scale. The other was the nuclear disaster in Japan after the 2011 earthquake. Let's break this down. It is classified as the highest level of nuclear disasters. That's good; higher is better. It is one of only two places to hold this honour. Even better; it's almost one of a kind!! Why isn't the Ukrainian government marketing this more??

Unfortunately, the accident wiped out the majority of landmarks that I would normally talk about in this portion of the column, so I'm going to have think outside the box here, and instead talk about some other interesting things:

Wildlife

So, as it turns out, radiation has some surprising effects on DNA and life in general. Who would have guessed? Not me. For example, studies done on fauna that currently inhabit the Chernobyl Exclusion Zone (fancy words for GTF0) have shown that animals in the area tend to live for half as long as anywhere else. However, HOWEVER... they also reproduce twice as fast, so the population doesn't drop, and overall population growth remains at the same level. It's kind of heartwarming knowing that nature can adapt so well to anything thrown against it...makes you want to stop caring about the environment and start leaving your trash everywhere, doesn't it?

Chernobylite

Chernobylite is the name given to a unique material found only in the highly radioactive nuclear reactor meltdown of the Chernobyl Power Plant. It is a glassy lava-like crystalline struc-

ture comprised of about 10% solid uranium. I like to think it glows green. Honestly, what is the government thinking? I'm sure many people would pay good money to take home some of this unique, highly radioactive substance not found anywhere else in the world.

Molemen

Up above, I talked about wildlife found

in the area. However, the real attraction of Chernobyl is the knowledge that we are no longer the only sentient race on earth. Radiation does funny things to biological life and it appears that there is currently a colony of about 600 molemen residing in the heart of the one of the reactors- The rest of this article has been removed at the request of the SVR. Мы наблюдаем за вами.

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Done Is Better Than Perfect



KEVIN VELOSO
4C SOFTWARE

THE GRADUATING WARRIOR

Welcome to the last article in “The Graduating Warrior” series. Graduating students are quickly wrapping up their final term! Fourth year design symposium has finished up for many students, and for others, they have their final report due at the end of the term. GradBall happened this past weekend, and graduating students are collecting their last set of photos to put in the yearbook! What’s left is handing in their last assignments, their last projects and reports, exams, and that’s it! Boom! Done!

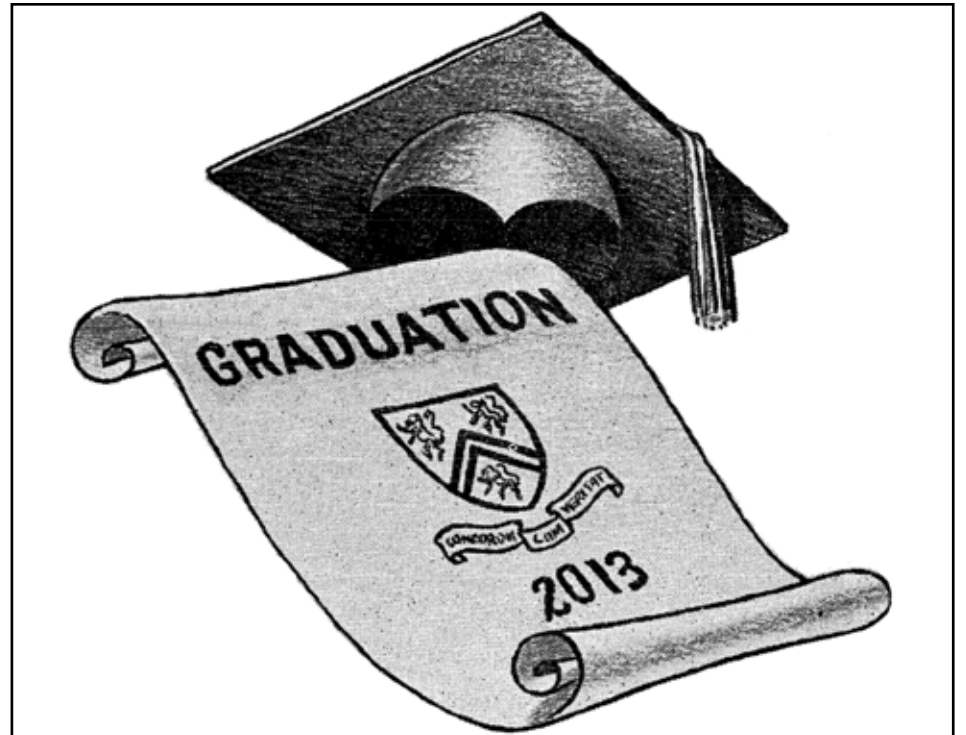
Graduating students have less than two weeks left until classes officially end. What’s left for me to say in this last article? There’s a quote that has been stuck in my head for some time, and although I don’t completely agree with the quote, I agree with it enough to discuss it here. “Done Is Better Than Perfect.” Don’t take this quote the wrong way: you should still strive for the highest quality of work you can. Especially as graduating students that will enter the work force and work towards becoming a licensed engineer, it’s of utmost importance that the work being produced is acceptable and safe. Still, the work needs to be finished, and this quote may be useless when “done” means “perfect”.

So, how’s the quote relevant? Again, fourth years have two weeks of class, then exams, then convocation. They can probably use this advice while wrapping up assignments. “Done Is Better Than Perfect”, and as long as it passes, they’ll still get that degree in June. If an excuse for half-assery is needed, that quote would be it.

Some graduating students may be in the mindset that the last two weeks may be their final days to do their last things. Symposium might have been the last thing that students as a class did as a social-academic function. GradBall might have been the last thing they

did together as graduating students before convocation. As the undergraduate career wraps up for fourth years, it isn’t uncommon to see them look back at the things they have done for the past five to seven years. Decisions made from the recent past may pop up, like choosing what to wear to GradBall or what courses to take in 4B. Thoughts from a time more distant like first or second year may also pop up, like making that first step into an Engineering event where they’ve met their fellow peers, attending the class party where they first met people who are now in their design project group, or even visiting an information session hosted by a company that they did a co-op for the following term. How is this all related to that quote? Having made those choices (some of which may have been more impulsive than thoughtful) got them out of dwelling on whether or not the choice is right. Better being “done” by actually taking those steps, than “perfect” where they’re dwelling on whether the things they could do is a good use of their time. The latter mindset is especially useful for decision making, but not so much for taking action.

With reminiscence comes possible thoughts of regrets. (For those with no regrets, congratulations!) Thoughts that start with “what if” may come and hit. What if they took a different set of TEs this term, possibly easier ones that didn’t take up so much of their time? What if they had different co-ops, or have taken the opportunity to travel during co-op? For those who still feel the nuisance of regrets, there’s a little something called the Regret Fallacy. In short, it’s realizing that making an alternate decision means rejecting all the decisions between now and that point in time. In relation to “Done Is Better Than Perfect”, the acceptance of the collective actions from first year until now is all part of being “done”, as opposed to to the “perfection” that is the conceptual ideal undergraduate experience (i.e. living in the world of “what ifs”). Would you have decided to attend another university instead of Waterloo if it meant not having this undergrad experience? Probably not. Then again, if you already know about the butterfly



Kevin Veloso

Congratulations to the class of 2013!

effect and chaos theory, having no “what ifs” pretty much follows from that.

There may be some “what ifs” that plague the fourth year now, “what ifs” that can still be acted upon. This can be as small as recalculating measurements for their final report to account for other factors (resulting in staying up for another two hours), to unresolved personal issues with other people, sometimes referred to in their heads as “that girl”, or “that guy”.

Sometimes these things bite your butt in the future, and the preoccupation on making the perfect decision stopped you from actually acting on it. (Or not, as we’ve seen from looking at the Regret Fallacy.) If “Done Is Better Than Perfect”, and if you’re a fourth year that has the time and energy, finish up anything unresolved you’ve started during your time at university. Maybe you got acquainted with your class just this term because of all the fourth year events and you’re hesitant to keep in touch because you’re not sure about

the best way to do so. Better to do anything than nothing at all, in this case. Maybe you’ve held a grudge this entire time to the questions guy who has improved over the years as to when to ask their questions. Let the grudge go, or at least make amends. I’m not going to list all of your university life problems.

Looking back at what I’ve written above, there are things that I could clarify and change. Having taken a creative writing course at Waterloo (two, actually), it always seems as though there’s something I can improve on in my writing. Whenever I see someone pick up an issue of The Iron Warrior, I’m reminded that people might actually read what I have written. However, I don’t think this article would be published if I didn’t hand it in on time. “Done Is Better Than Perfect”, and as long as the quality of this writing isn’t responsible for any lives (read: “disclaimer”) I don’t mind leaving what I’ve written as is.

Congratulations, class of 2013. You’ve made it!

A Culture of Making



KRISHNA IYER
3T NANOTECHNOLOGY

INTERESTING THINGS

Trading is one of the oldest and most traditional human occupations. Ancient civilizations in China, Mesopotamia, Egypt and India were involved in trade. The silk route established an era of regional dominance on certain resources. Because the world is as it is, some regions do not have the access to the same resources as others. Thus started the era of specialization. China gave the rest of the world silk while India gave us spices. However, as always, humans have had a tendency to try to be completely self-reliant. They invented artificial textiles to replace silk and grew different strains of spices in their own backyard.

In the present days, this has gone out to a whole new level. The 2000s have become the era of do-it-yourself (DIY). With the open source hardware movement, it has become really easy for anybody to make pretty much anything they want. With the advent of Arduino, the cheap microcontroller, there has been a spawn of innovative crafty designs. Their use of art installations is of noteworthy mention. Arduino has in a way enabled cheaper robots and scientific equipment. OpenPCR is a completely open source hardware instrument that is used in poly-

merase chain reactions (a reaction used by forensics and biotechnologists to amplify DNA). Xoscillo is an open source oscilloscope thus enabling things on a much cheaper platform (oscilloscopes are often really expensive equipment and costs can reach \$0.5 million). Arduino in quadcopters has heralded a whole new generation of drones.

Most important of all, Arduino has ena-

bled the making of home-made consumer end 3D printers. This has ushered in a whole new kind of DIY. People have made things in such machines without very much experience in heavy equipment usage like mills or CNC. It has become easy for a hobbyist to make all sorts of custom cases and other plastic parts for all sorts of different applications. This has enabled the spawn of a new generation of DIY. This has also

found a lot of use in scientific applications for rapid prototyping of components. However, 3D printing has its inherent disadvantages of lack of mechanical strength, etc.

Thus, the new engineer should ideally learn how to use such tools. Although these technologies cannot compete with purpose built equipment, there is not a better option than open source hardware to expedite the progress of project fast and easy.

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Point vs. Counterpoint

Should Class Averages be Included on Transcripts?

POINT 

DUSHANTH SEEVARATNAM
3T NANOTECHNOLOGY

Incorporating both the class average and ranking into transcripts will be beneficial to the student body. This is especially true when it comes to applying for jobs and even grad school. The reason for this is that there is always one of those courses on your transcript where your 70% might actually be one of the highest marks in the class. Unfortunately, the current transcript has no way to express this information to anyone considering you for a job or graduate position. To them, it's a low mark that drops your GPA and one of their first assumptions will be that you did poorly compared to the rest of your class, even though that is not necessarily the case. Yes, you can argue the fact that you can address the mark during the interview, but what if the mark doesn't even allow you to get the interview? That takes away any chance for someone to defend the reasoning behind the mark. By incorporating these two additional pieces of information, employers can understand the situation behind certain grades and keep that in mind when considering your transcript.

From an in-class prospective, having this information visible on someone's transcript could be used as motivation to do better in class. The reason for this is that now you have a personal comparison to the rest of your class and hoping for just a pass might not seem as appealing as it once was. Furthermore, this system really does help to benefit people

who want to do well. For example, in a course where you worked really hard and put a lot of effort into can now be shown through the comparison between your mark and the average.

This implementation may even help to standardize professors' marking. With the average being recorded on the system and made visible, you can even compare the averages between the different courses. For example, this means that if one professor, for whatever reason, gives the class an average mark of 65% while the remaining class averages are hovering around 80%, the class could give a reasonable argument that something is not right with the one course. This could lead to a mark readjustment, which will benefit the class, and even an evaluation of the course as whole, which will benefit future years. Going back to the point, this change could cause professors to evaluate in manner that is fair to the students and consistent with the other courses.

Finally, as engineers we are taught to use the information given to us to solve the problem at hand. In the case of calculus, we use our givens to find a solution, approximation or equation for the system. In design work we use our requirements as a given to know what implementations need to be done to help perform the task at hand. The same applies to our transcripts. The problem shouldn't be about the extra information on our transcript, the problem is getting the job position we want and using the information we have to help us get that position.

FARZI YUSUFALI
3T NANOTECHNOLOGY

In an educational system where testing isn't standardized between schools or even between classes, a little context would be really helpful in accurately detailing where you stand as a student. However, when a transcript has a more immediate impact on your future job opportunities, especially as an already under-qualified co-op student who can only work for four months at a time, the positives may outweigh the negatives in this case.

When it comes to students who are already in a very competitive environment come time to apply for jobs, the inclusion of these items into your transcript can severely help or hinder your application. However, the problem is that this inclusion would only benefit the top 10% of the class while the other 90% are left to suffer this added obstacle. Furthermore, this adds to the already high pressures to perform well academically as it affects your co-op possibilities to a greater extent.

While the discussion stands on the type of students present in Waterloo Engineering, it is safe to say that everyone is well-rounded and highly capable of performing most tasks in jobs relating to their field. Therefore, there really isn't a difference in capability when an assessment is being made between the person who achieves a term average of 80% and 90%. Conversely, if students are unlucky to have a course load that plays more to their weaknesses than strengths, they may be discounted as potential candidates for

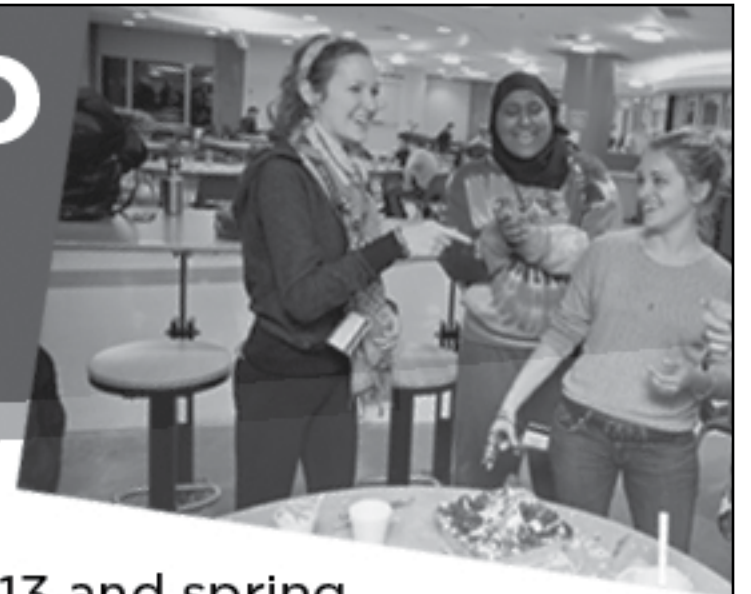
COUNTERPOINT 

a job because of the fact that they did not perform well compared to previous terms. Even more disconcerting is when a student has to deal with more than just school. For example, dealing with finances or family issues can deal a heavy blow to the mental capacity of student (especially when they are supposed to excel in their studies).

In the case of students, the actual abilities between them cannot be distinguished by those who achieve between 80% or 90% in any class. However, employers may be inclined to look at a transcript exclusively (as it now has context especially with rankings) and discount any other attributes that may paint a more honest picture of the student. Seeing as employers have to sift through a hundred applications, they may be tempted to disregard the student's resumé and focus on the numbers present on the transcript. Imagine a prospective employer entering these figures into a data sheet and only choosing to interview those who had the best grades. Unfortunately, this completely disregards the students who are taking on multiple projects and have acquired a more diverse skill set than their counterparts just mentioned.

When hiring students, like hiring others in the workforce, a combination of factors is what makes a person a good fit to work in a company. When adding these extra statistics into the mix, you may hire the person who is most successful academically (who may not be the smartest, in some cases) but may not be the best fit for the working atmosphere or dynamic for the job.

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Gaming Five Year Review



JON MARTIN
OBI JON1138

FUTURE OF GAMING

Hey everyone, this is the last issue this term for the IW, and there are still a bunch of revelations in the world of gaming that have not come to light yet. The biggest question right now is future of the Microsoft Xbox and Sony PlayStation brands as they take the first foray into the 'next generation' of gaming. This is also my last Future of Gaming article as I will finish my degree this term – Only two weeks left! I will also be looking at some of the trends that have become apparent over the last five years.

Let's get started, with the 'Next Generation' of consoles. Over the years, people have stopped referring to the Xbox 360 and the PS3 as "next gen" and have started looking forward to the next level of gaming. We have known for years that new consoles were under development from each company, even if they liked to say "No Comment"; no one just starts building a new console a few months before it comes out. These consoles have both likely been in development since the release of the last ones — it is the only way to keep moving forward and continuously remain competitive. Sony has now shown their cards — kind of. Their official press release left something to be desired, namely the console itself. While more detailed specifications were released soon after, the presentation definitely didn't reach as many people as it could have if the info had been presented to the captivated audience at the press conference.

Microsoft, on the other hand, has still kept their cards close, and has not officially announced anything about the new Xbox — and we don't even know the name. When Sony announced that their new console would be called the 'PS4' I think there were about two people in the crowd who were actually surprised, and they were the ones who got lost and though they were going to see a movie — not a press conference. For the new Xbox, the name is pretty much up in the air. It could be another number, or a new name tacked onto the Xbox name, which I think will be retained. I guess we will have to wait until Microsoft officially spills the beans before we learn any specifics, likely at E3 this summer, or a little sooner if they want to outperform Sony in an extravagant press conference.

Oh yeah, isn't Nintendo in this competition as well? Obviously I have been extremely harsh on Nintendo over the years — and it has increased each year. I'd leave them alone if Nintendo would actually do something new and innovative and actually try to be a real competitor in this battle. Nintendo was far behind the 360 and PS3 with the Wii in terms of graphics and processing power. The thing that allowed Nintendo to prosper over the years has been the motion control capabilities of the Wii. While this was advanced technology back when it was released, it is no longer important now as motion controls are built into mobile phone and tablet games, and both Microsoft and Sony have their own motion control systems that are both significantly more advanced than the Wii. Now Nintendo is banking on the Wii U, which actually has better specs than the Xbox 360 or the PS3, but will be laughable in the face

of the new consoles. For this reason, I have found Nintendo's claim as the "first next generation console" to be a complete waste of time. It may be the first console in terms of release date and generation groupings, but in terms of technology it represents the console Nintendo should have been developing for the current generation. Nintendo has relied for too long on selling their consoles based on their Intellectual Property — Mario, Pokemon, Zelda, etc. But even if that was the case they haven't truly taken advantage of the possibilities. Why haven't we seen a Pokemon RPG style game for the Wii? Why is the Pokemon genre on mobile only chang-

able gaming systems like the Nintendo 3DS and the PlayStation Vita, but it is definitely its own section of the gaming world now. The mobile market is unique in that it relies on standard operating systems versus standard hardware, so instead of choosing between Xbox, PlayStation and Wii you are instead choosing between Android and iOS. This means that the idea of standardized hardware is out the window, and the processing power can vary tremendously between phones and tablets. This represents a challenge to developers; how advanced do you make your game to entice people with beautiful 3D graphics but risk limiting your market be-

having a set console hardware configuration for a console makes sense for maintaining compatibility with all users, it can become a severe limitation even midway through a console's life cycle.

Maybe the way of the future really is the abandonment of console style gaming and the switch to operating system based games — PC, Mac, Android, and iOS. I don't think consoles will ever die completely, but I don't think you will see as much emphasis on graphics and processing power as the next few generations come around. We are eventually going to reach a cap on the amount of usable processing power — not a cap on the amount of power, but a limit to the resolution the human eye can see, or the number of enemies that can be on a map before it just gets too confusing. Consoles may continue to fill the role of the Wii, a fun, accessible system for the general public to play games, but for die-hard gamers, I don't think it can last forever.

That is it for this issue, and likely for the Future of Gaming as well. I have really enjoyed discussing the newest and possible future trends in the gaming industry, and despite the number of people that have come to ask me what type of console to buy (and my continual answer that 'It depends'), it has always been fun. Yay, no more publication deadlines! Once again, thanks for reading and listening to me rant and complain for the last four years, and as always, Keep on Gaming.



ouya.com



sony.com



nintendo.com

The next generation of consoles, Left: Ouya ; Center: Playstation 4 ; Right: Wii U

ing to 3D now? Nintendo needs to step up their game, or they need to forget about being in the hardware business and instead make games for the other systems, the same as how SEGA abandoned hardware and is still around.

I think the biggest threat to traditional gaming going forward is the widening of the market as PC, Steam Box, Android based consoles, and mobile gaming all become more viable platforms for gaming. Each of these platforms represents a shift towards multi-platform integration and resolution compatibility from small to big screens. With PC and Steam Box systems, people are starting to recognize that the PC is probably the easiest media centre you can have, and there is very little stopping you from playing your favourite games on a big screen TV from your PC. Android-based gaming — either on a console type product like OUYA, or on your mobile phone or tablet — again allows for cross platform use and gaming on a big screen, if your game progress could be synced in cloud storage so that you could continue from any system, that would be even better. Also, as a side note, I have also seen a couple of programs that allow you to emulate Android on a PC and use all your Android apps on your PC taking advantage of its better hardware.

This leads into something that I have discussed before: the idea of cross-platform licensing. It's the idea of buying a game once and being able to play it on any platform and continuing from your saved progress. Wouldn't it be great if you could play a game on your desktop, either on its monitor or on your big screen TV, then decide to go mobile and continue your progress on a tablet or smartphone? The home gaming could be on a PC or on a traditional console, or both if you wanted. I think this kind of integration would be easiest with digital versions of a game rather than manufacturing a disk that could work in both a PC and any or all consoles. As companies like Microsoft, Sony, and Nintendo increase the availability of digital downloads of games, this kind of scenario becomes more possible, especially if the save file is stored in cloud storage in a format any version of the product can utilize.

Finally, another field of gaming that has evolved over the last few years is mobile gaming. I have often looked at mobile gaming in terms of its threat to traditional port-

cause of the specs required to run the game? I would really like to see full console style games running on phones or tablets, and it is totally possible as many new phones have multi-core processors that are comparable in performance to some laptops you can buy at retail stores. We need more releases like Final Fantasy for Android or LEGO Harry Potter for iOS, full console or portable style games on mobile devices, games that push boundaries and improve the industry. While

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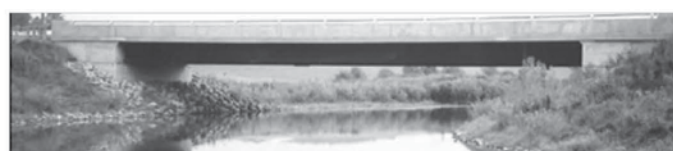
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Sexual Identity



Identity is a complex issue. Movies usually only directly address the concept of identity in terms of amnesia, identity theft, or espionage, but identity refers to one's concept of their continual existence - that which makes you the same person you were yesterday, a year ago, or at birth. Identity is mutable and dynamic. It is comprised of a variety of factors, including sexual identity.

Sexual identity is how an individual defines themselves in terms of who they are or aren't romantically or sexually attracted to. It differs from sexual orientation in that it refers to perceptions of attraction rather than actual attraction. Confusing yet? In that vein, sexually identifying oneself can be difficult since it is based on self-perception rather than behaviour, and perception is easily influenced by societal norms or attachment to one's preexisting self-identity.

Anyways, it's a broad topic. Here are five films that address various aspects of sexual identity. All of them are excellent.

Kinsey (2004)

Dr. Alfred Kinsey (Liam Neeson) rustles conservative jimmys in the first half of the twentieth century when he applies the systematic volume-based collection technique he developed whilst studying gall wasps to the surveying of sexual behaviour in humans through interviews. This exposes him to quite a bit of sampling bias, but he eventually publishes two controversial reports: *Sexual Behaviour in the Human Male and Sexual Behaviour in the Human Female*.

This biopic addresses the development of the Kinsey Scale, 0 to 6 rating used to describe one's sexual orientation from 0 (exclusively heterosexual) to 6 (exclusively homosexual). It's a useful tool in understanding sexual fluidity and one's own sexual orientation, and ultimately, addressing an important part of our own identity, as Dr. Kinsey discovers during the movie.

Kinsey's research was, at the time, revolutionary, and bothered a lot of people. This film is not revolutionary and may bother some people. However, they can suck it up, because *Kinsey* is a great damn movie. Liam Neeson is utterly frank and convincing as a scientist hell-bent on getting his data, to the point of damaging his personal life. The simultaneous clarity of thought and dignified social ineptness that he brings to the role is beautiful.

Chasing Amy (1997)

Holden (Ben Affleck), a comic book artist, is smitten with Alyssa (Joey Lauren Adams), another comic book artist. But it won't work out because a) Alyssa identifies as a lesbian, and b) Holden is an undiplomatic bag of insecurities at times. Also, Banky (Jason Lee) hates her.

With respect to a), Holden finds that identifying as a lesbian brings with the title a whole box of social haunts and conventions, of which Dating A Man is not an accepted one. Alyssa tries reworking said identity to accommodate Holden, but her friends are various degrees of un-supportive.

To be clear there is no "Amy" appearing in this film. The only reference to "Amy" is in Silent Bob's longest monologue to date, in which he reminisces on his ex-girlfriend. Despite the misleading title *Chasing Amy* is a pretty good film. Alyssa's screaming fits, as acted by Adams, are unflinching in energy and emotional

impact. Holden's character is written as naive and idealistic at times, but that's just how some people are. Some people like Holden do really believe that a threesome can solve everything, and for a long moment, I hoped that he and his friends would find their happy ending that way.

The Wedding Banquet (1993)

Wai-Tung (Winston Chao) and Simon (Mitchell Lichtenstein) are a happy couple in San Francisco. Wai-Tung marries Wei-Wei (May Chin) to alleviate parental pressure and get her a green card. Unfortunately his plan backfires when his parents insist on flying in from Taiwan to attend his wedding banquet. Also, Wei-Wei gets pregnant. Hilarity and angst ensue as Wai-Tung struggles with reconciling his many obligations at the cost of slowly compromising his own identity.

Would you believe that Ang Lee, director of sad and dramatic films like *Brokeback Mountain*, *The Life of Pi*, and *Lust, Caution* would have managed to make the first half of this movie a manic, lighthearted mess that you can't help but get swept up in? Well, he did. It helps that Chinese wedding banquets have the raunchiest party games. Then he returns to form in the second half: a drama of disappointed parents, a neglected boyfriend, and a pregnant wife. At least, it ends optimistically.

American Beauty (1999)

A suburban family: Lester Burnham (Lester Spacey), Carolyn Burnham (Annette Benning) and Jane Burnham (Thora Birch) experience various levels of an existential crisis. They deal with it by reinventing themselves in various ways. Lester quits his job to focus on the seduction of his daughter's friend Angela (Mena Suvari). Carolyn seeks solace in her new identity as a powerful, gun-toting master of her own sexuality. Jane retreats towards

the pursuit of "beauty" with a classmate, Ricky (Wes Bentley).

American Beauty was a big thing in 1999, winning the Oscars for Best Picture, Best Director, Best Actor, Best Original Screenplay, and Best Cinematography. Does that say anything about its watchability? Not really. But *American Beauty* is, indeed, a smart and provocative comedy that first finds a grim delight in the satire of the sexually repressed middle class that grows more and more chaotic as the characters jump out of the frying pan and into the fire. Yet it is still possible to find a semblance of peace in the madness.

Anyways despite its multiple Oscar wins it is not the least bit "boring", as Ricky accuses another character of being.

Ma Vie En Rose (1997)

Ludovic (Georges Du Fresne) is a girl, but her family disagrees. Since she is only ten they humour her insistence on garbing herself in dresses and dancing to trashy europop. Her parents are initially tolerant of their child's apparent quirks, but time passes and it becomes evident that Ludo's probably not going through a phase of fancy. His parents' tolerance wanes to resentment.

Not to be confused with *La Vie en Rose*, *Ma Vie en Rose* revels in the innocence and strength of childhood convictions against parental insistence that Ludo's penchant for dressing up in princess dresses and trying to marry his best friend will one day evaporate. The contrast between the joy Ludo takes in her life and the opinions of adults around her is really depressing.

My one quibble with this movie is that Ludo's mother (Michele Laroque) finds acceptance with Ludo's gender identity after a trippy sequence involving a buxom doll in a billboard, as opposed to after Ludo's suicide attempt. Also, it's in French, so you might need subtitles.



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Angry Birds Toons: Chuck Time



JOSHUA KALPIN
2N SOFTWARE

THE SHORT SHORT REVIEW

Hello, readers, and welcome to the last edition of The Short Short Review this term. Just as a reminder, in this column I attempt to review a short film or story in a really short number of words. To wrap things up for the term, I'll be reviewing the first episode of the *Angry Birds* cartoon series, "Chuck Time", in 351 words for no particular reason.

For those that have been living in a cave or just don't know what *Angry Birds* is, here is some background. *Angry Birds* is a mobile game that has evolved into a franchise with spinoffs, toys, and now a cartoon series.

The cartoon series (Well, at least the first episode,) features the standard ball-shaped "red bird" and the super-fast triangular yel-

low bird in what appears to be a Roadrunner & Wile E. Coyote style show. The show is clearly directed towards a younger audience, but was amusing and garnered a few chuckles in its short 2 minute and 45 second length.

Moving away from the plot, which isn't the main focal point of the games, it is important to discuss the animation quality. Being based on a game that has some of the crispest visuals 2D visuals on mobile devices, there is a certain standard that we can compare the show to and it definitely delivers. The animation is crisp and the colours pop off the screen. The birds gain even more emotion than they have in the games, and overall the presentation is top notch.

On the audio side of the audio-visual experience, the sound effects and soundtrack are also solid. The music is comical and reflects the overall theme of the franchise perfectly. This is complemented by well-done sound effects that squeak and squawk as expected.



mashable.com

Angry Birds Toons resembles the Roadrunner and Wile E. Coyote show

Overall, if the first episode is any indicator, *Angry Birds Toons* should be an amusing little cartoon series. The first episode, "Chuck Time", gets 4 little birds out of 5 for

being a solid first effort from Rovio. So with that, I'll see everyone next term with another edition of The Short Short Review. Best of luck with exams and stay tuned!

Auf Wiedersehen



MEAGAN CARDNO
1B NANOTECHNOLOGY

THE FINER POINTS OF FINE ARTS

Many forms of art, regardless of age, form, medium or creator, eventually reach their end. It's satisfying, but some bitter-sweet emotions may result when true attachment has been formed to the piece. Unfortunately, we have reached this point in this column. There are many genres that I have neglected to speak of in these little talks, but there are two that remain that I wish to mention, even if only briefly.

There is the entire realm of performing arts, including stage, musical, and dance performances, which often sees the overlap of many of the previous genres into one big spectacle, with the added difficulties and artistry associated with real-time performance. A play can be seen as a true, three-dimensional film being played before your eyes in an intimate and nearly tangible manner.

The subtle nuances in staging, lighting, props and scene/set design are very similar to that in films, with only some slight changes. Instead planning how things will look on screen and where people's eyes will be drawn, one must consider all possible viewpoints, making sure that someone from anywhere in the audience will have similar experiences-- but unique in the fact that there is something different from each angle.

Then, most obviously, there is the complete change of acting skills required for live performances. Theatre-trained actors and actresses are often given higher acclaim, due to the amount of perfection that they much be able to continuously

achieve for each show, in comparison to their filmed counterparts. An actor shooting a film needs a set number of takes to complete a scene, and have a multitude of attempts to get it right, limited only by budget and/or patience of the crew. An actor perfecting his role for stage performance cannot rely on the 'take it from the top' method, and must also be willing to do some slight improvisation if anyone makes a significant mistake, such as adapting their dialogue to fit seamlessly with a flubbed line.

Musicals and opera take this a step further by adding a musical component. Not only does this present the opportunity for live orchestras, but the actors have the task of perfecting musical components to their performance as well. Compare this to films that need only find suitable voices for the singing roles. Ballets can be considered on a similar level-- actors completely focused on the physical rather than verbal, and portraying the development and emotions of a character solely through motions and complex, beautiful choreographers.

Some theatrical spectacles that might suit someone interested in the field include *The Phantom of the Opera*, *The Lion King*, *My Fair Lady*, and really anything that is currently playing at the Stratford Festival.

The final topic that I want to touch on is a mildly controversial one, in the regards of viewing it as a fine art. Video games are, to many, simply another artistic medium, which at once contains elements of other arts with new twists. Like the novel, there is the need for a gripping story line and emphatic characters that motive the player to continue investing their time in the experience. Like a film, there are audio and visual aspects that the developers can

express themselves through. Like a live performance, each member of the audience will often experience the piece of art differently, as they progress through story lines and encounter unique struggles.

This is a very key component-- this interactivity that the characters have with the game can make the audience more emotionally invested with the characters simply because they can feel like they are the main character, controlling their actions and fate. *Heavy Rain*, for the PS3, is unmatched in this respect. It has a film-like quality to it, in the way that the plot line progresses in such a suspenseful and complex manner, but there is such flexibility in the gameplay that makes it even more immersible than other games. It is not hindered by the concept of a single plot line (also seen in films and novels and plays) that play out exactly as planned; it has the ability to change based on the player's performance. Instead of simply receiving a "Game Over" whenever a mistake is made, the ending to the game adapts, even instigating major character death.

Some of the most highly acclaimed video games have breath-taking artwork as well. A favourite title for the Wii, *Okami*, illustrates this perfectly, as it possesses a stunning range of artwork, mimicking Japanese ink-style pieces in its characters and settings. Its main gameplay mechanic, creating magical designs using a 'celestial brush', propagates the motif of art creating and beautifying the world.

Deep and complex plots can be found in numerous franchises, but often the mark of a great saga is one that speaks a message to its audience, be it profound or more fable-like in nature. The *Metal Gear Solid* saga has received particular attention in this respect, as many philosophical ideologies are addressed, including the ideas



fanpop.com

The Phantom of the Opera must account for all audience viewpoints during the performance

of corrupt governments, thought control, extreme propaganda, and essentially exposing the charade of the 'good guy, bad guy' concept in most video games.

Tributes to music in video games can be found anywhere where video game fans lie as well-- such iconic games such as *Halo*, *The Legend of Zelda*, *Final Fantasy* and even the aforementioned games all have breathtaking soundtracks, worthy with as much praise as composers for other genres. *Journey*, one of the most highly acclaimed video games in terms of overall artistry, and one that I have personally yet to play, has already captured my undivided attention with its soundtrack alone (my personal favourite being *Apotheosis*).

No matter what you take away from any form of art, regardless of what you choose to experience, or how deep you search for meaning and connections, the final line is very simple: try to take the time enjoy that which we are so deeply privileged to have.

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St. Patrick's Day Extravaganza



GRAEME SCOTT
3T CHEMICAL
ERIC EVENCHICK
3T ELECTRICAL

GETTING GOOD HEAD

Hello, good readers! It's lovely to see you again (I can see you through the words I write via sorcery). I hope you all are well.

As you may remember (or not), the lovely holiday of St Patrick's Day was recently upon us. As such, it only seems fitting to do an article discussing the beverages I so humbly imbibed on this fine holiday, for science.

Now, I could not very well bring my typewriter with me to a bar on St Patrick's day, this is apparently a big no no, so I will be basing this article off of notes that I oh so conveniently left on my phone for myself. I will also be going off memory some points (spotty though it may be) as I inevitably forgot to take notes later in the evening.

Well...lets get to it. We begin our adventure on St. Patricks Day eve, at a fine Ottawa establishment.

DAY 1

Beer #1: Guinness. This seemed like a rather obligatory choice, but felt necessary to properly celebrate the occasion. Now, if you're reading this article, I am assuming

that you most likely know what Guinness looks/tastes like, but for those of you who do not, here's a quick summary. Guinness Draught is very dark, with a nice, light, frothy head. Unlike most stouts however, Guinness does not have a particularly strong odour or taste and is more filling than rich. It's a good drink, particularly as an introduction to darker beers, but isn't nearly as flavourful as most stouts out there. Overall: 3.28/5 Surly Bartenders

Beer #2: Rickards Red. A very rare beer imported from Venezuela which I was fortunate enough to find on tap at the bar I was at. This bar of course being Heart & Crown, only the finest purveyor of craft and imported beer in Ottawa. Very little of this paragraph is true. In my phone I noted that it was a pitcher and that I was splitting it with Jared. Again, I'm sure most of you know what Rickard's tastes like, but again, since I'm apparently supposed to actually write about the beer, here's a quick summary. For me, this is just one of those beers that's consistently good, but just good. Like Guinness, it isn't overly flavourful, but it certainly doesn't taste bad. Overall: 2.89/5 Surly Bartenders

INTERJECTION! Whilst ordering my next beverage I couldn't help but notice that they had Shocktop on tap. All scores have been retroactively devalued because of this.

Beer #3: Smithwicks. The first of the night that was actually a new beer for me. It wasn't my initial intention to order this, but I had had a few drinks and was feeling a little "adventurous". The beer is from Ireland (luckily enough) and is a Red Ale, distributed by Guinness. I believe my notes for the night speak for themselves on this one. "It sewems tasty, pretty average ale. Not swpequal. Goof docket beer. I had another one." But for a bit more description, it is good and a bit more flavourful than Rickards Red, but is otherwise pretty similar in colour and smell. It has a nice hint of hops, again not very strong, but a bit more flavour than your average large production red ale. Overall: 3.43/5 Surly Bartenders

DAY 2

That's right folks, it's a new day, and what day is it? Why St. Patrick's day of course (we talked about this earlier, you really should have remembered). To celebrate the day, I went over to my friends house to partake in modest consumption of alcoholic beverages, as well as to not make very much noise or be rowdy whatsoever.

Beer #1: Muskoka Lager. I have spoken before of my affection for Muskoka beer and while their lager is probably my least favourite of their beers, that should not diminish from the fact that it is still quite

good. This is a tough one to critique, it's just a good, smooth, and tasty lager. Great for drinking on a patio in the summer, or on St Patrick's Day from a plastic cup. Overall 3.41/5 Surly Bartenders

Beer #2: Muskoka Cream Ale. Moving up the Muskoka Ladder of Deliciousness (tm) we come to Muskoka Cream ale, which is, to say the least, deliciously crisp and refreshing. The beer is a bit darker in colour than the lager and has a nice bubbly head to it. This has a very nice flavour to it; sweet and slightly hoppy, with a very nice dry and slightly bitter finish. One of my favourite summer cottage beers and a very good drink. Overall 3.75/5 Surly Bartenders

Magical Green Liquid: Now we come to the cream of the crop, the true piece de resistance of the day, the magical green liquid. Served in a plastic cup from a large tupperware bin, this gloriously green gulper is a true crowd pleaser. Made from what appears to be peach juice concentrate, vodka, ice, and food colouring, as well as some possible mystery ingredients I may have missed, this lovely concoction is as smooth and complex as a fine french wine. It has a lovely aroma (peaches) and a wonderfully syrupy mouthfeel. Just delicious. Overall: a whopping 4.82/5 Surly Bartenders

Well, that's all for now folks. Join us next week when we discuss the Federal Budget.

Modernist Daiquiri



LUKE VAN OORT
3B MECHANICAL
PARTH DAVE
4B MECHATRONICS

MODERNIST MIXOLOGY

Rum Caviar

50g of rum
50g of distilled water
300mg sodium alginate (0.3%)

Calcium Ion Bath

500g water
3.25g calcium gluconate (0.65%)

Strawberry 'Ravioli'

180g strawberry puree
1.0g sodium alginate (0.55%)

Lime Foam

Juice of three limes
3 Egg whites

The Daiquiri is one of the truly classic cocktails in mixology. Unfortunately, the variant of the cocktail that is now commonly seen is distinctly different than the original beverage. Currently, if one orders a "daiquiri," they will often get a frozen strawberry slushie with a little rum added. The original

cocktail is a very strong mixture composed primarily of rum and a small amount of lime juice. In fact, the only thing in common between these two cocktails is the use of rum as the alcoholic component. As an aside, if one wants a traditional daiquiri in a typical bar, ordering rum with a splash of lime will usually work. For the modernist take, we're combining the newage strawberry and traditional lime versions of the drink.

The modernist take on this classic cocktail takes inspiration from the ocean-going origins by first presenting the rum in a form reminiscent of fish roe, created using a compound extracted from the cell walls of certain algae. It functions similarly to gelatin; while gelatin gels after a temperature reduction, alginate gels in reaction to the presence of calcium ions. Therefore, to make the caviar, the alginate is hydrated into the rum and dripped into a solution containing a high concentration of calcium ions. This results in the outer layer of the droplet gelling while the core stays fluid. However, alginate has trouble hydrating properly in a solution with a high alcohol content. Therefore the alginate is initially hydrated into the water using a blender, with the rum added afterwards and blended again. The caviar is prepared by first hydrating the sodium alginate in the water using a blender. Due to the calcium



Parth Dave

Inspiration of this modern cocktail came from ocean-going origins

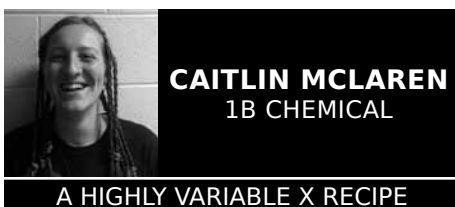
sensitivity of alginate, using distilled water hydration is recommended, especially since Waterloo tap water contains an unusually high concentration of calcium ions.

The strawberries are presented similarly, but using a larger droplet size than the rum caviar. The alginate percentage is higher in the strawberries due to difficulties with gelling. It is theorized that particulates in the puree inhibits the formation of a stable gel. Agar clarification of the strawberry juice would likely allow the strawberry juice to

gel at more normal concentration of 0.3%.

Foaming was done in the Aberdeen Hiflier, but to briefly recap, the egg whites are mixed with the liquid and whipped forming a stable foam which is then skimmed off. The foam is then plated with the other ingredients. The resulting drinking experience is quite fascinating as the alginate balls burst in the mouth releasing their flavourful juices as the foam decomposes into a lime juice, providing a complete daiquiri experience as the parts combine to create a tasty whole.

A Highly Variable Oatmeal Muffin Recipe



CAITLIN MCLAREN
1B CHEMICAL

A HIGHLY VARIABLE X RECIPE

You look at yourself in disgust. After months of cooking Highly Variable Recipes, you realize that you have eaten nothing but sugar for the past year. Now, see what has happened! You weigh 2.5 pounds more than you did at this time last year! Time to turn over a new leaf. Here is a highly healthy recipe for oatmeal muffins.

First, you need some oats and milk in equal volumes. Mix them together and leave the oats to soak for a little while. You

will need them again, so don't eat them absent-mindedly while mixing the other ingredients.

Take out another bowl, and mix egg and oil. One egg for every cup of oats is proper, and one-quarter as much oil as milk. A little less oil will not kill you, and if you want to use less, the muffins would be even healthier. (That, ladies and gentlemen, is a guilt-trip.) Beat the eggs and oil together. Put in some vanilla.

In yet another bowl, mix together flour, white sugar, baking powder, and salt. Use the same amount of flour as oats, a quarter as much sugar, a couple teaspoonfuls of baking powder (or baking soda, what the heck), and maybe a teaspoon of salt. If you only have brown sugar, just use that.

Mix the egg/oil mixture with the oats/

milk mixture. Then, slowly, fold the dry ingredients into the wet ingredients. Stir them together until they are combined- but do not stir too much, or the muffins will be tough. The next paragraph contains science.

Flour contains two proteins called glutenin and gliadin. When you add water to the flour and stir, these proteins combine to form gluten. In small amounts, gluten provides some elasticity, but you don't want the muffins to become chewy and dense. Stir as little as possible so that you don't get too much gluten forming.

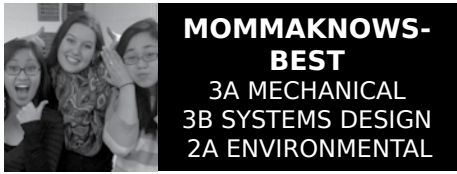
Get out your muffin tins, and either grease them or put paper muffin cups inside them. Fill the cups about 2/3 full with batter, and bake at 450°F for around 20 minutes. Stick them with a toothpick

to check if they are done: the toothpick will come out clean when the muffins are finished.

A note: there is nothing preventing you from putting goodies in them, so long as they are healthy goodies. This would include cranberries, raisins, blueberries, and nuts. It would not include chocolate chips, Skittles, M&Ms, toffee, or caramel bits. I absolutely forbid you to use any of these, delicious though they may be.

Eat your healthy muffins in moderation. No matter how healthy you make them, they will still taste good, and things that taste good are bad for you. Enjoy them as much as you can, though - from now on, the good things in life are closed to you until you lose those extra pounds. Coming up next week: how to cook celery!

Spring Cleaning: Not So Bad As You Think



Oh yes, it's that time of the year again. The clocks have been wound back, the snow is beginning to melt, and the smell of spring is in the air. We all know there's only one thing that means... SPRING CLEANING! We've already gotten started, but for those of you who haven't, it's not too late! And we've got some great tips to help you out.

Reorganize your closet!

- Folding your shirts vertically saves you space and maximizes visibility! We managed to fit 5 drawers of clothing into 3!
- If you have anything you don't want, don't throw it away! Donate it to Value Village or the Salvation Army!

Clean your bathroom!

- If you don't have any toilet bowl cleaner handy, Coke is a good alternative. The acids in Coke will break down the

stains. Just make sure you let it sit for at least an hour (overnight is better) before you flush!

- We all know Waterloo water is crazy hard and that getting rid of the water stains on faucets takes way too much effort. Cut a lemon in half and use it to scrub at the hard water stains, and voila! Your faucet will be good as new.
- Got a gross bathtub? Put white vinegar in a spray bottle, spray that tub, sprinkle baking soda over it, scrub, and rinse with water! Your bathtub will be ready for your bubble baths in a matter of minutes.
- If you're not sure of how to clean something, a Magic Eraser is a good bet. THOSE THINGS ARE AMAZING!!!

Clean your desk!

- If you're feeling lazy and don't want to bust out the Q-Tips to clean your keyboard, try running the sticky part of a post-it note between the keys to catch all the dust!
- Put some binder clips on the edge of your desk to keep all your cables or-



darkroomanddearly.com

Folding shirts vertically saves space and maximizes visibility

ganized.

- Do the pen test! Set some time aside and sort through your massive stockpile of free pens. If it doesn't work, toss it!

Have fun with it!

- We all know spring cleaning can be a drag, but it's so rewarding and worth it.

Try to make the best of it by blasting some sweet tunes, getting your housemates to help out with the common areas, and having a drink to reward yourself now and then. ;)

Now that we've shared some of our favourite tips and tricks, we hope you have a great time freshening up your place!

Top Ways to Relate to Women



TOPZ (WITH A Z)

Disclaimer: As perhaps evident in this week's first paragraph, we feel that "irony" is too often a weak excuse for sexism. We wrote this article with the intention of laughing at misguided attempts at relating to women: some we have seen and some we have done. Topz is a satire column and we would simply like to remind you of this. We love women... like actually <3

You may be surprised to learn that Topz (With a Z) is in fact written by two men. We know what you're thinking: but Topz (With a Z) is so gender, sexual orientation, and race-neutral that it seems it is written by the Greendale Human Being. The secret is that we check our privilege. However in today's patriarchal hegemony, too few men know how to relate to women effectively, so bros this article is about putting hoes (women (bitches)) first. To start out, put yourself in a woman's pumps by listening to what we are telling you to do by following our guide to the top ways to relate to women.

Irony

Women are sick to death of sexist stereotypes and actions like telling them to go make a sandwich, clean the dishes, do the laundry, finger my bum, listen to me cry about my mother issues for an hour (LOL, just kidding about that last one. GAYYYYY), et cetera. Ergo, they will be sure to appreciate your demure wit when you relate to their frustration over these lines by using them ironically. For example, "Make me a sandwich!" is sexist, but "Make me a sammich!" is brilliant satire. This way you get a sandwich and get to be a feminist. Irony is a powerful tool, like when we were being ironic about crying about our mother issues. As though we would do that! We're too busy playing sport games and drinking beers. Get it? Irony! So don't believe what you hear: especially from Cat DeClaro, you bitch!

Compliment Them

Men: how much do you like it when you hear a woman compliment your body? A lot, we would presume (unless she's assuming that you only work out your arms to look good in Hollister shirts (we're talking about

you, Alison Lee, you bitch)). The more intimate the compliment, the better: ever have your bulge complimented? Feels good, man (if you haven't, draw attention to it by constant scratching and stuffing with socks). Anyway, by the same merit, women will love if you constantly talk about their boobies, fish taco, and vagina. Girls love being objectified because it makes them feel like a Barbie doll: a cold, plastic, disproportionately constructed Barbie doll. While complimenting, be sure not to go overboard lest you sound insincere or creepy: don't mention personal things like new haircuts which bring out the subtle green in her hazel eyes, reminding you of that day at the beach when you first heard her laugh, and making your penis turgid.

If You Wanna be Her Lover, You Gotta Get With Her Friends

Show what a nice guy you are by seeing the merits in her friends and family. Be sure to compliment the way they look so that she knows you are attracted to other women, but actively chose to be in a relationship with her on Facebook. Take this one step further by sleeping with them to show that, like Gandhi,

you can resist the temptation to engage in emotionally-committed relationships with other women. This is why women love it when you talk about your ex: it shows that she is on your mind, but you are settling with your girlfriend nonetheless. Unless you are Kristina Lee (sister of Alison Lee) in which case you somehow fail to see that infidelity is actually the truest form of fidelity, you bitch.

Pay Attention to Her Schedule

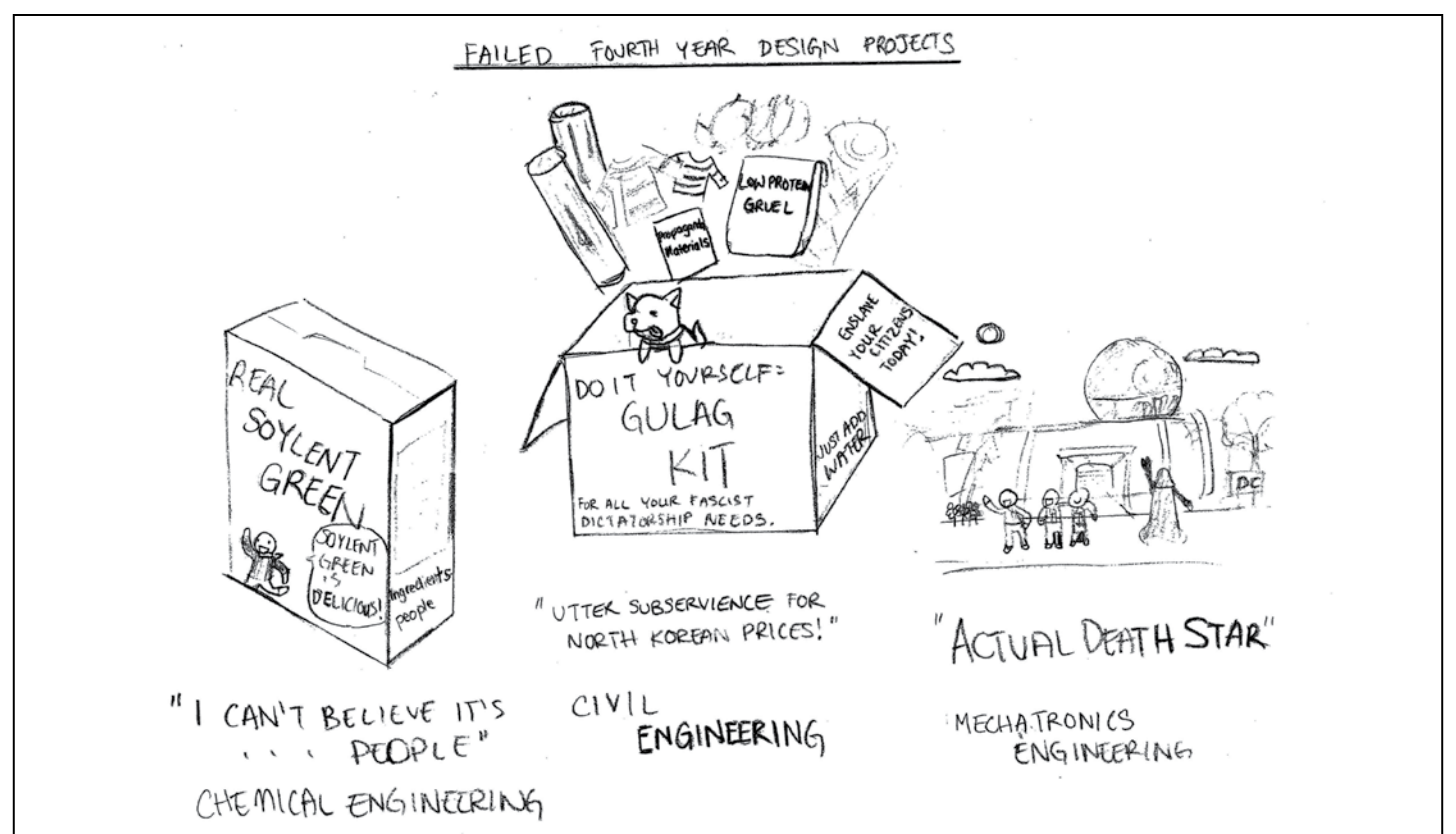
Women hate when men are inattentive to their needs and emotions. The best way to relate to women is to be super sensitive and track their menstrual cycles (that's woman-speak for periods). Whenever they seem even more irrational than usual be sure to be sensitive enough to check if it is their time of the month, or day as in the case of Farzi Yusufali, you bitch. Women love it when men talk about their mensies, especially when the men are demonstrating how much they understand them. For example, be sure to cite the recent UofT study which suggested that mood swings are not actually a physiological effect of hormonal cycles, but rather in the heads of women, because bitches be cray-cray.

Treat Them Like the One of the Guys

Women are all about breaking the glass-ceiling, taking over the boardroom, wearing pants: being one of the men. In a professional environment, they don't want to be treated any differently. As such, it is important to talk to women about all of the things which you talk to with your boys. Tell your manager about the really big poop you took this morning, mention to your coworker about how no-fap is going and the last pornographic video to which you did fap (that means masturbation), bring up with the harassment committee about what your genitalia smell like. This doesn't just apply to water-cooler banter either. You know how we bros like to bro out over some brewskis and smell each other's jock-straps (unless you're Jacob Terry, you bitch, just let us smell yo dick)? By the same merit, you should smell her panties. At least this is the argument we are sticking with in court.

By now, you'll be able to talk to women like a pro. Pretty soon, all of the ladies will be enamoured by your tact and grace and – who knows? – perhaps even let you vulcanize the whoopee stick (unless they're a prude like mom, you bitch)!

The Iron Comic



Jessica Keung, 1B Civil

The Iron Crossword

Talk that Talk

NANCY HUI
3A CIVIL

1	2	3	4	5	6	7	8	9	10	11	12
13			14					15			
16			17				18	19			
20			21				22				
		23				24					
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46						47			48	49	50
51					52				53		
54					55				56		
57					58				59		

DOWN

- 1 Ark-itect
- 2 On top of
- 3 Consider to be
- 4 Rebuked
- 5 Voltage over current
- 6 Comedic
- 7 Latin: "Refer to preceding source"
- 8 Acronymic Omegle salutation
- 9 Woos
- 10 Tylenol competitor
- 11 Bolshevik leader
- 12 Maker of the Clamato
- 18 Concerning Thor's father
- 19 A small Arab state
- 25 Not all, but not none
- 26 Finished climbing
- 27 A modicum
- 28 1993 D'ni franchise games
- 30 Terra
- 31 Apply gravity without normal force
- 32 Salvador of melting clocks
- 33 Association
- 35 Posse of Madagascar predators
- 36 Tahitan wrap dress
- 38 Similarly
- 39 Limerick you like a maverick
- 40 Made thin pancakes
- 41 Whilst aloft
- 42 She wrote Twilight
- 43 strcat(French("yes"), Russian("yes"));
- 44 Rhodolia Rosea
- 45 Calendar predicting apocalypse
- 47 1.61 km
- 48 Trollface: "_ ___, bro?"
- 49 In a group of 13-across
- 50 Tolkienesque in scale

ACROSS

- 1 Head bob of assent
- 4 Greek word of wisdom
- 9 Soothe
- 13 The loneliest number
- 14 Overweight gay subculture
- 15 Margarine
- 16 Gourmandized
- 17 Universally well spoken
- 20 Country of origin
- 22 A swear for Julius Root
- 23 All rebellious and stuff, yo
- 24 Underage pussies
- 25 Evening gala
- 28 Da Vinci Lisa paintings
- 29 Egg-shaped
- 30 One hundredth of a krona
- 31 American om nom agency
- 34 Allocate
- 35 Fudge A Satisfactorily Elegant Clue
- 36 Spherical princess testers
- 37 Cenozoic, Mesozoic, etc.
- 38 Largest human artery
- 39 Bollocks
- 40 Devowelled closets
- 41 A swear for Ron Weasley
- 42 Othello's ethnic brethren
- 45 Stuck in mud
- 46 Archimedes catchphrase
- 47 Politically incorrect asylum
- 51 "___, m----f----!"
- 53 Cleaning bucket's partner
- 54 Sedgewick the "it girl"
- 55 Demand as rightful
- 56 Boxer Cassius Clay
- 57 Ayn of objectivism
- 58 Western, sci-fi, etc.
- 59 "What's up, ___?"

Sudoku

#2013-05

ANDREW FISHER
4B CIVIL

Easy

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

Medium

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

Hard

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

Solutions for previous crosswords can be found on *The Iron Warrior's* website at iwarrior.uwaterloo.ca/distractions.

S13 Issue #1 Deadline:
Friday, May 22 at 5:00 PM
Send your submissions to:
iwarrior@uwaterloo.ca

THE IRON INQUISITION
Yola Harsono, 1N Mechatronics
Kevin Veloso, 4C Software

"What is the biggest difference between you now and your first year self?"



"I have finally realized that I will require real pants in the real world :("
Laurin Benson, 4B Chemical



"Alcohol, Coffee, and All-Nighters."
Sean Walsh, 4B Mechatronics



"I'm actually excited about learning new things in class now."
Trevor Jenkins, 4B Management



"I know what a Management Engineer does."
Alexandra Collins, 4B Management



"The length of my hair."
Alessia Danelon, 4B Mechanical



"I used to care about grades, now just graduating."
Chris Letnick, 4B Computer