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THE IRON WARRIOR

THE NEWSPAPER OF THE UNIVERSITY OF WATERLOO ENGINEERING SOCIETY

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CECS GEARS UP FOR ECONOMIC CRISIS

Students Fear Threat of Employment Difficulties

MICHELLE CROAL
2B CHEMICAL

With politicians and economists predicting a potential recession in Canada in the near future, it has been a troubling term for students in co-op and Engineering at University of Waterloo. Everyone from first to fourth year seems worried about how the stock market crashes in July and October of this year have or will affect their employment opportunities, over the next four months and the quite possibly the next two or three years. If you don't read *The Economist* religiously, the problems seem very abstract and hard to conceptualize, especially if you were lucky enough to get employment for the upcoming Winter term through Jobmine's first round of postings.

The Co-operative Education and Career Services (CECS) website posts employment statistics weekly after the first round of postings for the following term. For Engineering students, the statistics looked bleak as of November 20, 2008: averaging at 45% for 1A students in all 4-stream programs and 70-90% for those students in second and third year. Numbers for graduating engineering students were not presented, as the 4A's are not searching for employment for the winter 2009 term, and those off-stream are currently employed. CECS claims that historically, employment rates for co-op education students have ranged from 86-99.9%, which puts this term on the lower end of the scale,



Stuart Pearson

The Co-op building may be less busy than usual in the as UW copes with the effects of the global economic downturn.

at least at this point. CECS statistics are actually "officially taken" well into the term, and so do not account for the percentage of students who are unemployed at the beginning of their work terms. This term (Fall 2008)

saw an employment rate of 99.6% for engineering students, however it was discussed in the previous issue of *The Iron Warrior* that hiring for this term had effectively taken place before economic crises happened, and

as such the statistics cannot be taken as representative for what engineering students should expect in the months to come.

See **JOBS AT RISK** on Page 5

Supporting Canadian Troops Abroad

THE IRON WARRIOR
NEWS BUREAU

Two short weeks ago, Canada observed Remembrance Day in recognition of the sacrifices made by men and women in the service of our country. Many young people today struggle to connect with the events of over sixty years ago, unconcerned with the struggle of Canadian soldiers fighting overseas today. To many students at the University of Waterloo, the war in Afghanistan seems so far-off with little relevance to their everyday lives.

However, this is not the case for all students— UW student Matt Austin, a UW Campus Conservatives Association member, is currently serving as a Combat Engineer for the Canadian Forces in Afghanistan.

On Remembrance Day, UW Campus Conservatives ran a Support the Troops booth in the Student Life Centre all day to raise awareness about the Canadian Forces and their missions overseas. They also raised \$172.04 for the Legion by giving out Poppies along with In Flanders Fields bookmarks, Poppy temporary tattoos, and Remembrance Day memorial postcards. Passers-by also had the opportunity to sign a banner for Matt Austin and his regiment, wishing him well and offering their messages of support. Newly elected Member of Parliament for Kitchener-Waterloo, Peter Braid even made an appearance, stopping to sign the banner and offer his support.



Elizabeth Pilzecker

Recently-elected Kitchener-Waterloo MP Peter Braid made an appearance at the SLC on Remembrance Day to show his support.

GRT: 2031

JOAN ANG
2B SYSTEMS DESIGN

On November 19, I took the GRT down to Kitchener to attend the Region of Waterloo's Regional Transportation Master Plan Workshop. The workshop was part of a second round of public consultation workshops focusing on the Regional Transportation Master Plan (RTMP) and Transportation Demand Management (TDM). Each round of consulting consists of three sessions, one in each of Cambridge, Kitchener and Waterloo.

The goal of this workshop is to make sure that the goals and objectives of the RTMP reflect what the residents of the region want and need and also to discuss the TDM Plan.

The RTMP currently under development, is a set of policies and priorities that will guide how transportation direction and investment decisions will be made in the Region of Waterloo. The key goals of the plan are to optimize the transportation system, promote transportation choice, foster a strong economy and support sustainable development.

While the RTMP focuses on the development of a transportation infrastructure, Transportation Demand Man-

See **TRANSIT EXPANSION** on Page 4

Letter from the Editor

Airports: Coming and Going



STUART PEARSON
EDITOR-IN-CHIEF

Where have the last three months gone? The term is almost over and finals are about to get underway. Pretty soon, it will be time for most students to pack up and go home for Christmas. For some like myself, home may just be an hour's drive down the highway or less, but for many others, getting home for the holidays means flying.

Lots of people cringe at the thought of airports- crowded, stressful, and confusing. For my last co-op job, I was located outside of Fort McMurray, Alberta, and was required to fly back and forth between Fort Mac, Edmonton, Calgary, and Toronto every few weeks. From April to August, I flew a total of 17 times, and as a result spent approximately 65 hours waiting around in airports. During my stay in purgatory- err... the airport, I came to observe a great deal.

Airports are fascinating places whatever way you choose to look at them. From a practical perspective, they can help you turn a four-day drive across the country into a four-hour flight. However, the three to five hours spent waiting there before getting on the plane can stretch out to an eternity. There are problems with security of course- I always forget about something before I walk through the gate. Usually it's just a belt buckle, but another time it was a ringing cell phone; I have a tendency to be quite absent-minded sometimes. After the

security checkpoint begins the long and often tedious wait in the so-called "lounge". Overpriced food, screaming babies, and delayed flights merely compound the frustration.

From an engineering perspective, however, the airport is transformed from a slow, terrible nightmare to a wonderland of fascinating systems and technology. You can thank the mechanical engineers every time your plane lands safely, and the electrical and computer engineers for designing the complex systems. Geological and environmental engineers also play a significant role in the development of airports. For instance, Pearson airport is essentially a giant concrete blob in the middle of Mississauga, which drastically affects water drainage patterns and the state of the environment for kilometres in every direction.

Though nearly every engineering discipline is represented at an airport, it is ultimately the realm of the civil engineers. From a young age I have been drawn to airports, amazed at the size and complexity of their construction. When I was in grade 8, I even went so far as to construct a model of the new terminal at the Toronto airport out of glue and spaghetti. Since the airport at which someone lands is often the first glimpse a visitor catches of a new country, governments often seem eager to spend extra money to make them more impressive. For instance, the aforementioned new terminal in Toronto is architecturally amazing, rising high above the mere utility-grade standards that seem to pervade much of the infrastructure in Canada.

No matter where you go, no matter how awesome or terrible your trip has been, it's always nice to come home again to the people you love

In my travels over the years, I have had the opportunity to visit a number of different airports across the country. The nicest one that I have been through is undoubtedly Pearson airport in Toronto, massive and beautiful. Hundreds of millions of dollars went into its construction and millions of travellers pass through its gates every year. Even the parking garages are sophisticated- a special set of motion sensors determines the number of parking spaces remaining in each lot, guiding visitors towards the coveted empty spots.

On the other hand, the airport in Fort McMurray is probably the sort of place Douglas Adams had in mind when he wrote:

"It can hardly be a coincidence that no language on Earth has ever produced the phrase, 'as pretty as an airport.' Airports are ugly. Some are very ugly. Some attain a degree of ugliness that can only be the result of a special effort."

The tiny, overcrowded airport in Fort Mac has attained that special degree of ugliness, and to make it worse, there are no real opportunities for sustenance but for booth selling greasy muffins and a handful of poorly-stocked vending machines. Most scholars would agree that Dante did a reasonably adequate job of describing Hell in his *Inferno*, but if the Medieval Italian poet had ever been stranded at that little airport for six hours, it would be safe to assume that his poem might include tales of baggage carousels rather than lakes of fire.

Airports can be emotionally significant, too. Travelers disembark with trepidation for far-off places, families are divided and reunited, and weary tourists and businesspeople return home after being away. There are so many homesick, nervous, and excited people, all of whom have different stories and experiences.

For me, flying used to be such a momentous experience. Only the most special of occasions involved flying: my family's vacation to Disney world in Grade 8 or my trip to Scotland a few summers back. After commuting to and from Fort McMurray all summer, flying seems to have lost much of its magic. I can practically sleep through takeoffs now, and I generally prefer my flights to be as uneventful as possible. Flying may have lost its lustre, but there's still something about airports that captures me every time I go. One thing's for sure, no matter where you go, no matter how awesome or terrible your trip has been, it's always nice to come home again to the people you love.

Good luck with your exams and co-op terms, and best wishes for the holidays!

Letter to the Editor Congratulations

I want to congratulate *The Iron Warrior* staff on an excellent term. The issues you put out this fall were full of relevant, informative articles and features. Your layout editor incorporated photos in a creative way. Your copy editor kept spelling and grammar mistakes to a minimum. You've even been able to bring in a good number of ads.

The work your volunteers do, particularly the Editor-In-Chief, is a big commitment, especially while juggling a challenging engineering workload. Pat yourselves on the back. You're one of the reasons Waterloo is the best engineering school in Canada.

Harout Manougian
Electrical Class of '08
Winter '07 Editor-In-Chief

THE IRON WARRIOR

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The Iron Warrior is a forum for thought-provoking and informative articles published by the Engineering Society. Views expressed in The Iron Warrior are those of the authors and do not necessarily reflect the opinions of the Engineering Society.

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

All submissions, unless otherwise stated, become the property of The Iron Warrior, which reserves the right to refuse publication of material which it deems unsuitable. The Iron Warrior also reserves the right to edit grammar, spelling and text that do not meet university standards. Authors will be notified of any major changes that may be required.

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Have You Flexed Your Civic Muscles Lately?

Ralph Nader Speaks to UW



JON RADICE
2B CHEMICAL

To know and to not do is not to know.

Ralph Nader repeated this old Chinese proverb many times throughout his presentation. The 3-time presidential candidate came to Hagey Hall in order to celebrate the 35th anniversary of the Waterloo Public Interest Group, and who coincidentally was the one that urged UW to create the group back when he first came to Waterloo in 1972. Often vilified by many groups, specifically in 'losing' the 2000 presidential election by removing crucial votes from the democratic part, Nader has never been afraid to stand up for his civic ideals and speak out against the biggest powers facing our world today.

Nader's first claim to fame was attacking the unsafe practices of the auto industry in the 1960s with his scathing book, "Unsafe at Any Speeds." This book was the first time specific car models and devices, namely the Chevrolet Corvair, were fingered as catastrophic safety hazards and promptly forced legislation to be passed regulating safety in the auto industry. Additionally, Ralph Nader has helped push for such institutes like the Environmental Protection Agency as well as promoting such environmental bills like the Safe Drinking Water Act among many others. Much to the chagrin of many larger corporate identities, Nader has been instrumental in protecting not only the rights of consumers but rights for everyone in the United States.

His talk given to the students on November 13 focused around our civil liberties. He began by pointing out and emphasizing how little contact the average person has with their own governance, despite being in a democratic nation. He rationalized that the reason that most people choose to ignore this important facet of society is because the topic of civic

rights weighs incredibly low sensationally. Whereas elections garner a lot of news coverage and sparks quite a few conversations, the day-to-day activities of all three tiers of government slip by with very little mention. And this reporter can sympathize, I cannot think of a more boring event than watching that parliamentary channel that is hidden somewhere in the 80s on cable or going to a town hall meeting where there is a two-hour debate

ryone feel about government. Very soon this idea of Democracy, to which Nader claims is "a thin veil of one even today," will be replaced by everyone's favourite style of government, Fascism. No need to worry how we live our lives, someone else will tell us how. Nader tells us not to worry though, we'll still have the freedom to choose what clothes to wear, where to eat, and what shows to watch. But these so called freedoms are just dangled there

entire job, or at school when the answer is just too long-winded to bother. Even when we discuss why we hate that certain political issues are being neglected but do not even to try to help that voice being heard.

To know and to not do is not to know.

You claim you support a cleaner future, while all the while you take a job out in the oil sands of Alberta, where the documentation of comparing the place to being an environmental sinkhole is pretty much tantamount at this point. Compare that to the engineers at the now desperate big three automakers where their last few decades of research in development was based primarily on seeing how many more cupholders they can get into a car instead of focusing on actually improving fuel efficiency. Compare that to doing a job that compromises your identity just because it pays the bills.

To know and to not do is not to know.

And yes, I'm becoming preachy. And I know nobody likes a holier-than-thou opinion writer so I'll bring it back a bit. This phrase sat my preachy ass down and made me realize that there are very few things that I claim I support that, when it is all said and done, I would actually follow through with any action. As a result, this half-of-an-engineering-degree I currently own is just proof how little I know. Too many times I've set aside my own beliefs and values, things I would actually care about, so I could get an assignment done or study for a course that does not interest me in the slightest. And then I realize that the balance to be an engineer and a socially conscious person is a very fragile one. One where if I devote too much time in one, the other suffers. And it doesn't matter how many Ethical Dilemmas I write about in PDEng, I still have to face that simple little phrase. I have to idle along, arguing with TA's for half of a mark, and staying up late at night because I can't solve this differential equation while my ideals slowly dull and fade away.

To know and to not do is to not know.



Stuart Pearson

Ralph Nader offers his views on the world at Hagey Hall

on fence height ordinances. But, as Nader explains, there are still some groups of people that are very interested in what the public deems a complete bore; corporations and corporate interest groups. Because of the widespread apathy, not only directed towards voting but towards all levels of governance, we as people are losing our voices to these monolithic entities. And their grip gets tighter every year. The more laws the squeeze through, the more unrelatable the law becomes to the average person, and the more distant eve-

to sate our ideals that we still have some semblance of control in our lives. But even now it may be too late.

And this is where my conscience begins working over itself, and my reporting skills get tossed out the window and replaced with my opinion-loving soapbox.

To know and to not do is not to know. This little quote kept scratching the back of my mind for the entire lecture. The fact of the matter is we've all been in that position; on the work term when we would rather cut corners that sit through the

"I Need HELP Writing My Work Report!"

CHRIS TOGERETZ
4N CIVIL

OK, so you might not be thinking about work reports right now ... in fact - you're probably thinking about final exams and the start of your next co-op term! However, this is likely the last Iron Warrior that you'll read before returning to campus in May, work report in hand.

Thus, it just might be a good time to read this!

I was talking with a second-year Chemical Engineering student last week while waiting for the bus. After finding out that WCDE (design.uwaterloo.ca) converts work reports into case studies to better help professors teach design in

courses, he told me that he was having problems writing his work report. The basis of his work report was deciding between two alternatives that would improve the existing process in the factory he was working in.

The two-page report that he submitted to his supervisor contained justification for picking "Alternative B" - he determined that both alternatives would "work", and then chose the second alternative - it costs less and would probably be easier to install. His question to me was "How do I make those two pages into a full-sized work report?"

In the next ten minutes (until he got off the bus), I asked him a number of questions. They were something like this: "Why do you want to implement any change at all?" "Are feasibility and

cost the only two criteria to make the decision?" "What sort of requirements are there for the problem?" "Are there any constraints?" "What are these two alternatives like?" "What happens after you pick the best alternative?" "Who gets to use the system?"...

As you might have guessed (especially if you are a first-year student who has seen the Engineers Without Borders "Rooftop Rainwater Harvesting" case study), I was walking through the WCDE Engineering Design Process! When he had answered all these questions, I told him why I was asking those questions in particular and then told him that he was left with a rough outline, which I have (in the interests of saving valuable space in the IW) posted on the WCDE website at [http://design.uwater-](http://design.uwaterloo.ca/wcde/4.FOR_STUDENTS/4.Engineering_Design_Process.html)

[loo.ca/wcde/4.FOR_STUDENTS/4.Engineering_Design_Process.html](http://design.uwaterloo.ca/wcde/4.FOR_STUDENTS/4.Engineering_Design_Process.html).

As you will see when you go to the website, the resulting work report that the student is able to write would be technically sound, possibly get a good grade, and likely would be very useful to his employer as well (not just to purchase the correct alternative in this case, but maybe as a template for ALL major decision-making processes company-wide)!

I hope that you will remember this article when you start to write your next work report about four months from now. If you wish, save this Iron Warrior! You can always find a .pdf version of this article on the WCDE website, too!

It's the end of the term; this is my last article. All the best, guys and gals!

UW Tops MacLean's Survey Yet Again



MATTHEW CASSWELL
2A CIVIL

For the second time in as many IW issues, Waterloo has been given top marks as a university. Except this time, it is Maclean's who ranked us, and this time, we're number one overall.

As the news broke through first in a UW Press Release via the Daily Bulletin (and is now proudly displayed on the UW homepage), UW has been ranked number one in the Best Overall University category, ahead of McGill, U. Alberta, and UBC. The University has also continued its 17-year-run of holding the number one ranking as Most Innovative University, ahead of McMaster, McGill, and U. Alberta, while Waterloo's students (that's right, you!) have

been ranked first in Leaders of Tomorrow ahead of U. Alberta, McGill, and UBC.

The only category of the four main ones that Waterloo did not come in first was in Highest Quality. McGill took first place, with Waterloo scoring a respectable second, ahead of Queen's and U of T.

In a UW Press Release, Amit Chakma, the vice-president academic and provost of the university, said last week that they are, "Absolutely delighted that our reputation

remains extremely high as Canada's best university in several key reputation measures."

Under the Comprehensive Universities' category, Waterloo scored first in reputation, student awards, and in scholarships and bursaries.

The MacLean's rankings are available in the publication's newest issue, which became available November 24th, and will remain available until January.

Here Comes Santa Claus Making an Impact in the Community



Ben Brady

Waterloo Engineering's 2008 Santa Claus Parade volunteers posing with the float. Pictured in rear is The Tool and Toolbearers.

Big Plans For Regional Transportation Network

TRANSIT EXPANSION
Continued From Page 1

agement (TDM) focuses on influencing why, when, where, and how people travel. This means TDM initiatives attempt to encourage people to travel outside of peak hours, to use modes of transportation other than cars, to make fewer trips and to drive more efficiently. One of the Region of Waterloo's current TDM initiatives is the U-PASS. For those who don't know, the U-PASS is what allows University of Waterloo students to get on a bus by showing their Watercards. Other initiatives include the extending the network of bike paths throughout the Region and ensuring that roads are pedestrian friendly. An example of pedestrian unfriendly road is Westmount Rd. North between Columbia and University Ave. where there is only one sidewalk meaning that students walking along Westmount Rd. have to walk on the shoulder or jaywalk across traffic. Another example is the corner of King St. E and Queen St. N in downtown Kitchener where there are missing pe-

destrian crossing lights.

What I've written about are a few of things that were discussed at the workshop. But why should you care about the RTMP and TDM?

I care because I don't have a car. Since the implementation of the U-PASS, student ridership on the GRT has increased. As students at the University of Waterloo, we will be living in the region for the duration of our education and potentially after university as well. This means we have a vested interest in the success of the regional transportation system. We also have unique transportation requirements. Through the RTMP and TDM workshops, we have an opportunity to help shape the way transportation is developed to meet our current needs and the needs of future students.

Interested in being heard? The third session of the workshop is being held in Waterloo on Thursday November 27. For more information visit <http://www.movingforward2031.ca/>

Pharmacy Building Rises in Kitchener



JON MARTIN
1A CIVIL

Construction seems to be one of UW's greatest endeavours at present, on the main campus we have the Quantum Nano Centre, across Ring Road is Engineering 6, and Hagey Hall is still undergoing its own perpetual renovations.

There is another university building currently under construction which few people know about, the Pharmacy building on the corner of King and Victoria Streets in downtown Kitchener. The Pharmacy building, or Building A, is a part of the UW Health Sciences Campus, which will also include the Optometry building.

As the Optometry building (or Building B) rises from the ground, the Pharmacy building is nearing completion. Faculty and staff are now moving in, with students

starting their work in January. There are currently 90 enrolled students who are out on co-op terms; an additional 120 students will be joining them in January as well. The faculty complement will include 16 pharmaceutical scientists and 14 clinical scientists, as well as 20 staff members.

The cost of the building has amounted to \$48 million, while the fourth floor has not been completed with its eventual faculty labs. The budget for the entire site has been set at \$78 million.

The building features expansive sections of glass, as well as panels covered in images of herbs. The interior will include classrooms and labs, as well as a cafe and open areas for students to meet. The building is composed of a seven storey tower, with the rest of the building capped at four storeys, totalling 120,000 sq ft.

UW will continue to expand and grow, adding new programs and facilities, within the region, country and other continents. Where we go next, nobody knows.

Big Brother on Queen's Campus



MATTHEW
CASSWELL
2A CIVIL

The new program is expected to cause a rise in hostility from students who do not appreciate being approached about something they say in an otherwise private conversation.

The Journal, Queen's newspaper, says that it is unlikely that this programme "will have much impact on fostering dialogue" in crowds of thousands of people. It further goes on to critique the whole program, saying that the facilitators will need to go through intensive training in order to be prepared to deal with the large variety of social issues they may need to intervene with, and that the good intentions this program may have will not be enough without a proper backbone.

In an interview with CTV.ca, student union president Talia Radcliffe said that the programme is "meant to act as a facilitation of dialogue, as opposed to wrist slapping... I don't think facilitators are interrupting conversations - that's been misconstrued."

Misconstrued or not, the issue has been brought up by students at Queen's and in other groups across Canada, who claim that the programme is reminiscent of George Orwell's 1984, where the Thought Police would arrest people who may think about what may exist beyond "The Party" that ruled in that period.

In the name of political correctness, and as a method to make their students more self-conscious about what they say, Queen's University has introduced a new pilot project called the Intergroup Dialogue Programme.

Administrative staff at the university have gathered a group of "specially-trained student facilitators" whose duties will be to listen in on other student's conversations (*Imprint's* "Campus Creep", anyone?) and be on the look-out for any conversations which may contain social issues, racism, sexism, homophobia, degradation towards women, or other controversial topics.

The project has claimed to be part of Queen's efforts to encourage diversity, which has self-proclaimed to be fighting racism and social injustice on campus. It is also meant to complement other recently-implemented measures, such as offering kosher and halal foods in cafeterias and creating gender-neutral bathrooms.

Waterloo Cases in Design Engineering (WCDE)

WCDE is a group in the Faculty of Engineering that converts **work reports** into
Engineering Case Studies
for use in Engineering courses.

Work reports submitted electronically are worth
seventy-five P5 points!**

cases.uwaterloo.ca

Sample Case Studies

All first-year concept courses are using these cases:

Hydro Quebec

- Alternative Energy Sources

Engineers Without Borders

- Alternative Drinking Water

Other cases currently in use include:

- Foot Brace Design

Lower Employment Levels In Upper Years

JOBS AT RISK

Continued from Page 1

Looking deeper into the employment rates, Chemical and Nanotechnology engineering students seemed to be the hardest hit, at this point in the term, with only approximately 50-70% of upper year students (2A, 2B and 3A) students finding employment. CHE 4-stream frosh are likely understandably worried, as their employment rate is the lowest in the Faculty, at 24% for a class of 66. CIV, ECE, ENV/GEO, TRON and SYDE upper year students seem to be the most in demand, with a range of 85-95% employment for the coming winter. Management Sciences and Mechanical upper years are ranging in the 60-80% employment, while the majority of 4-stream first years are facing 35-40% employment.

How did this happen? To answer that question properly would take a full Economics course with Larry Smith (or more likely two or three), but in essence, inflation and other global factors may have caused company assets like stock price to rise too high in recent years, resulting in a crash in October to "actual product values" or lower. Companies, investors, and banks lost significant money, and this is reflected in consumer confidences. People have started to buy less, invest less and as a result, the situation is exacerbated as companies and corporations lose revenue and capital. As a result many companies, particularly smaller ones, do not have the capital required to start new projects, especially if they involve company expansion and hiring. Take for an example the auto-industry in North America: already since early 2007, GM, Ford and Chrysler were constantly in the news for production cuts, layoffs in the thousands and other financial trouble. That has seemingly since spread to other sectors.

We as students are forced to recognize the fact that if companies are having trouble paying current staff, they cannot be expected to hire more individuals, especially students for the short term. Obviously, the benefits of Waterloo's co-operative education to us as students are immense; they're half the reasons we came to this University in the first place. However, it is not always obvious to employers that hiring a co-op student can be equivalent to a fresh source of creativity, motivation and enthusiasm; they think only in terms of the potential lack of experience, the training

required, the availability of projects and other costs, for which we cannot blame them.

How is this going to affect you? We're all in the same boat, to varying degrees. Fourth years have at this point already got all their co-op experience, so the economics of all this is affecting their search for full-time employment. It's more than just a four month job now- they want something that can lead to career. First years seem the hardest hit at this point, especially as they may not have any experience working at all, never mind working in the engineering field. A missed work term in the beginning can cause significant stress in later terms, due to the graduation requirement of 5 out of 6 completed work terms. If economic situations worsen or hiring freeze policies continue over the next 2 years, many students may find their graduation dates threatened. It will be interesting to see how the University deals with this problem if it continues to grow, as Waterloo prides itself on the unique co-operative education system it provides for its students.

What can you do about it if you're still not employed? For the most part, it would be difficult to stimulate the entire global economy just to retain Waterloo's co-op advantage. All we can do for the immediate future is wait, but in the meantime, be proactive! The absolute number one piece of advice if you're still looking for employment at this point is to be flexible. Do not limit yourself to a specific city or field of industry. It is highly likely that many fields exist within your discipline, from design, manufacturing, consulting, R&D to who knows what at many locations across the province, country and globe. Consider that restricting yourself to one field only will negatively impact your opportunities.

Consider returning to a previous employer. This doesn't necessarily have to be your most recent employer either. You may be rewarded with more responsibility and projects, but I realize that your work term experience may make returning to an employer an undesirable option. Apparently CECS has already emailed off-stream engineering students, encouraging this decision, which goes to show they are just as worried as we are.

Find a volunteer position, with a charity, student team on campus, or research project with a professor in a field of your interest. Again, this comes with the undesirable factor that you will probably not be earning wages

during the four months, but keep in mind that you may gain valuable experience you otherwise might not have considered.

Make constructive use of your term off. Research topics that may help you in future work terms, such as industry safety and design standards, environmental regulations or innovations in your field. These may not be resume-worthy, but they are topics you can bring up in interviews or kick-start the beginning of your next work term. Learn a language, complete a first aid course or create a new programming language. Remember that you don't have to pay off-stream tuition fees to University of Waterloo in order to learn something on your work term.

Contact engineers you know in the industry through friends, family and other net-

working, even if they're not directly hiring. They may be willing to read your resume and offer insightful experience that is more useful than what upper year resume critiques offer. Find a mentor that can help you find a direction in your undergraduate co-op and full time career and give advice with respect to the upcoming situations in the industry and economy.

The next few months and two or three years will be interesting for co-op students and engineers in the industry alike, and around the planet. For those of you with a work-term employment for the winter, be thankful; for those of you without, be proactive. At this point, all we can do is wait and see what happens. (Thanks to Pat Croal and Alex Giroux for their help with this article).

Engineering Jazz Band Strikes Back

Charity Gig on November 29th



ERIC COUSINEAU
2A ELECTRICAL

So it's that time of the year again, not Christmas, it's the end of the term. This means a lot of things, but for a group of 40 students from Engineering and other faculties it means the end of term Charity Gig for the Engineering Jazz Band. We like to call ourselves WRTT (With Respect to Time) and you've probably seen us around. This term alone we've played: in CPH Foyer on Nov. 7th, at FEDS Volunteer Appreciation night on Nov. 6th, EngPlay last Friday evening, and Monte Carlo Night during Frosh Week. You can come watch us for free at Warrior Weekends this Friday night.

The Engineering Jazz band has been around since Winter 2005 when our founder, Ally Chan, decided she wanted to start a band for engineering students. She had played during high school and wanted to continue in university; this is

the sentiment that all of us share. Since then we've grown from 5 people jamming once a week to having to turn down people due to having too many members. We no longer have a tiny music library, which means we won't be playing the same songs term after term. If you've ever been in the SLC on a Sunday evening you've probably heard us rehearsing.

At this year's concert you can count on new songs like Sing Sing Sing, Gospel John, and Vehicle. As always the tickets will be sold for \$10 in the Orifice, of which all proceeds will go to Habitat for Humanity. The concert is this Saturday evening, Nov. 29th, in the Conrad Grebel Great Hall. The doors open at 7:45 PM, and the concert will start at 8:00 PM. Refreshments will be provided during the intermission, then the second set will conclude at 9:30 PM. Tickets will be on sale all this week so be sure to pick some up. Come out and support your fellow engineering students and share in their love of music, by experiencing the jazz experience of the term!

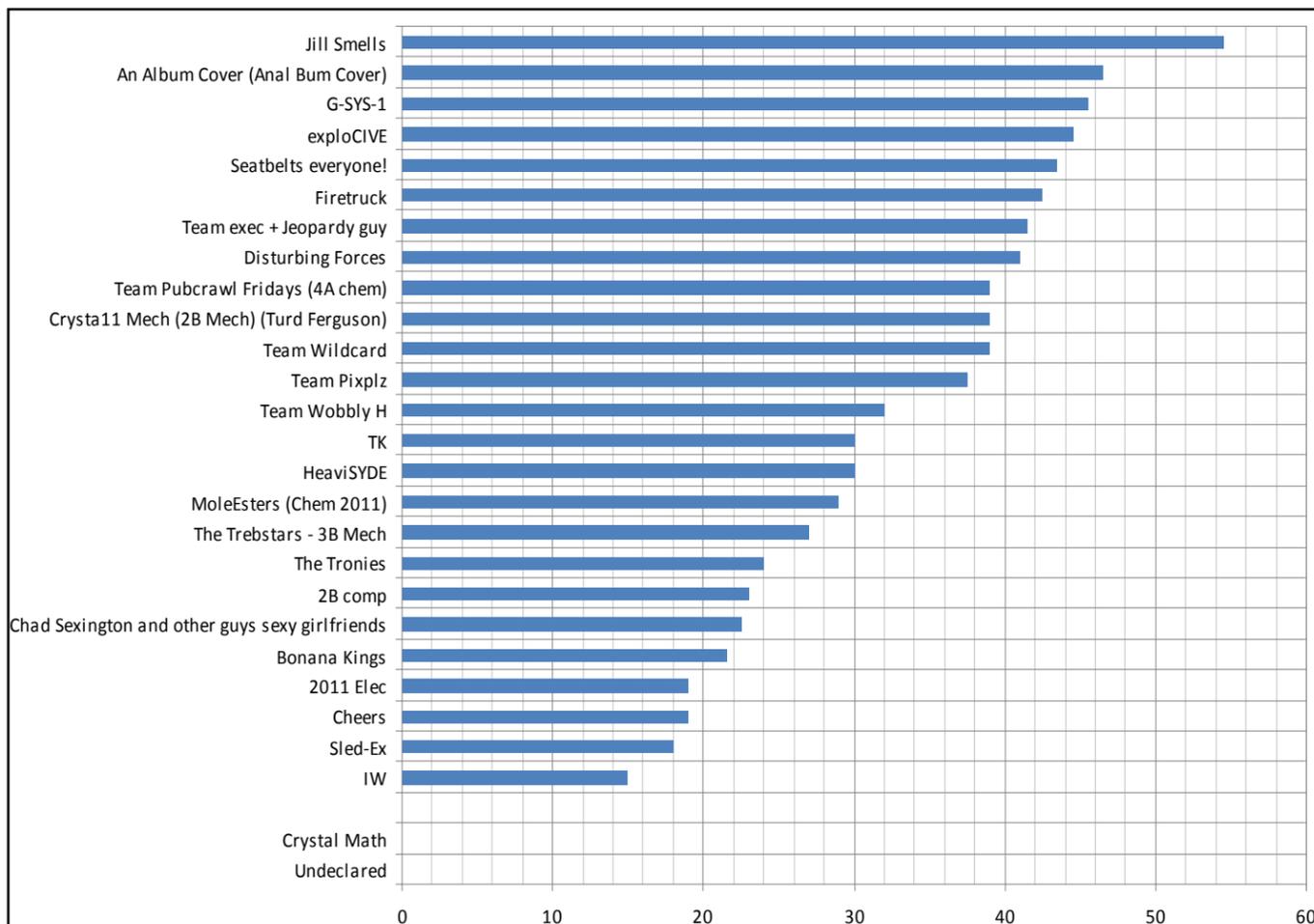
GENIUS BOWL DIRECTORS ENGSOCA

Congratulations to the winning teams of the Fall 2008 edition of Genius Bowl. The three winning teams were 'Jill Smells', 'An Album Cover' and 'G-SYS-1', in first, second and third places, respectively. Spirit prizes were also awarded to 'Seatbelts Everyone' (2B Geo) and to the team only known as the 'International Businessmen'.

This term's Genius Bowl included a variety of questions spanning four normal rounds and two death rounds. Overall, contestants were satisfied with the level of difficulty, length and presentation of the event. Some of the featured questions included 'Why were most gun duels fought at dawn?', 'How many dimples are on a golf ball?' and 'Who said the phrase *cogito ergo sum*?' Some of the more interesting answers to our questions included 'expendable', 'a banana', and 'dammit Armstrong'. Other, more inappropriate answers were given to other questions, but you had to be there to hear them! We also did something different with the prizes this term. The most obscure, worst or funniest answer was selected by the judges and the respective team was awarded with a banana, a condom and lube for 'her pleasure'. That definitely made for interesting times.

The four of us look forward to the next Genius Bowl. Good luck to the future Genius Bowl directors in A-soc and B-soc. Thank you to everyone that showed up on Wednesday night.

Genius Bowl XIV Results: 08 Grads Take Title



OUTGOING ENGINEERING SOCIETY EXECUTIVE REPORTS

Presidential Report



TYLER GALE
OUTGOING
PRESIDENT

I could use this last report as another opportunity to inspire you with provocative, controversial news from the engineering society. But the torch has been passed on to Sarah Scharf to discuss anything even remotely interesting to that end. I'm going to take the opportunity to contribute to the sense of closure for those of us graduating from A-soc at the end of the term.

To coin the phrase that everyone has been saying: looking back it seems like the better part of five years have passed by in barely any time at all. Thinking back, I remember a campus with green space, parties in a house with bottles lining the roof, and in first year an engineering society that had three nominees for the Paul and Paula Plummer Award.

Times have changed.

It is an exciting time for us students at The University of Waterloo – the Faculty of Engineering in particular. There are three tower cranes on campus right now, almost reminiscent of the skylines in rapidly growing cities like Dubai. Dubai, coincidentally being the tentative site of a new satellite campus for the Faculty. Those of you just entering first year will be graduating from a school with the space and spice to support the research, administration and teaching involved in upholding the reputation of its 13 degree programs, and more. I am slightly jealous.

We live in a different city now. Our traditions have shifted somewhat, in response to a shift in resource allocation that makes it seem like city police have nothing better to do than

respond to noise complaints. I sincerely hope that this crack down on noise complaints has not imposed a detrimental effect on the city's ability to fight real crime.

I appreciate the Faculty administration's tendency to use a proactive approach in dealing with our differences and the odd mini crisis that has come up. I wonder, however, how a storm can blow in one night and with a single crash of lightning the IRS we knew and looked forward to, can disappear.

Like a pendulum the Engineering Society has swung back and forth in time between an organization preaching professionalism and shenanigans. In my opinion there is a correct balance between the two, and we're getting there. This proves that a community suffering from serious structural limitations on institutional memory can learn from its past mistakes and grow. This term there were 12 nominations for the Paul and Paula Plummer award, more than any other year since I've been around, and in hindsight I think we even missed a couple of people this term.

The Engineering Society executive torch is being passed on, not just to a new set of elected representatives, but in effect to a new generation. The outgoing crew consisted of three 2009 and two 2010 grads, one which was replaced by a member of the class of 2011 midway through the executive term. The new crew consists entirely of 2011 grads and later. I am fully confident that we are in a strong position moving forward. The new kids are more than ever aware of their roles and the expectations that the student body has of them. The future of engineering student life at the University of Waterloo is in capable hands and I'm excited to see what they can do with it. If you have any questions or suggestions for them, now is the time. I wish them all the best.

VPI Report



SARAH SCHARF
OUTGOING
VP INTERNAL

Sniff, Sniff...I can't believe it's already over...This term went by so fast! I hope everyone enjoyed themselves at the many events we had this term. I'd like to thank all of my great directors for hosting the many successful events we've had over the course of the past 3 months. I won't attempt to thank each of you individually in this article (a big long list of names is no fun to read), but you know who you are, and I appreciate all of the time and effort you've put into your directorships, especially if you had five (Tim). I would also like to thank all of those EngSoc-ers and not-so-EngSoc-ers who made it out to our events. Watching people enjoy an event is what makes our hard work all worthwhile.

For those of you who are still looking for a bit more fun before exam cramming begins, and for those who have somehow managed to miss every event so far and who have finally had the epiphany that EngSoc events

are *awesome*, there are still a couple left! Engineering Society Council Meeting #6 is tonight, Wednesday November 26th, at 5:30pm in POETS. Bring some good food, eat good food that other people brought, and witness the swearing in of the new executive team for A Soc. All directors will be recognized for their hard work, and the Paul Harlick Award will be awarded as well. The End of Term Pub Night in POETS is this Friday, November 28th at 9:00 pm. We will be watching the EOT TSN video, and the Tool will be making an appearance as well. The following evening, our very own With Respect To Time jazz band will be performing at their Fall 08 charity gig. Tickets for this event will be on sale next week. Hope to see you there!

I had a wonderful time as your VPI for the Fall 08 term. I sincerely hope I did a good job, and that I didn't step on too many toes this term (If I did, and I know I did, I'm very sorry). I know that Tim is going to do a great job as your next VPI. He has held many directorships, and his enthusiasm is very contagious. Thank you all for supporting me as Vice President, Internal. I really enjoyed it. See you next Summer!

VPX Report



DAVE HALFORD
OUTGOING
VP EXTERNAL

Well I guess that this is the last time that I will have to give my exec report and there really hasn't been a lot happening over the last week to report. I would first like to thank my Santa Claus Parade Directors, the members of the Clean Snowmobile Team and WARG for putting together the float for the parade and also for showing up in the cold and rain

to participate. I would also like to thank the Tool Bearers for bringing The Tool out for the event and enduring the rain with everyone else. I would also like to take this opportunity to thank Marissa Bale for doing an awesome job at running Movember, and all those who are currently sporting sexy staches to help raise funds for prostate cancer research.

I would also like to take this opportunity to thank you all for letting me represent you for the past 16 months. I've learned a lot of things over that time serving you. Through going to conferences with other schools from all over the country I've learned a lot of traditions that

VPed Report



JEFFREY LIPNICKY
OUTGOING
VP EDUCATION

This is my 12th and final IW Exec Report. Yes, 12th. (2 terms)*(5 issues/term) + (2 Frosh Issues) = 12. I can do math. Except on my midterms... anyone want to tutor me? ;o) I'm a very good student.

Anyway, on to business. The PDEng Review is the same place as we last talked – with the Dean. I sent him the letter so we will see how things go. I guess time will tell.

With coop, there isn't really much to report. Job hunting has been a little more difficult because of the economic times; a lot of jobs have been canceled. There is still plenty of time to get a job before the term starts, so don't fret. If you have any issues, please let me know and we can work them out.

In the coming weeks before Christmas, I will be preparing the report for the Dean on counseling services. I have received a number of signatures on the petition, which I will be including with this report. When it is finished, I will put it online and send an email to mailing list to let you all know. If you have any suggestions or comments you would like me to include, please pass them my way.

Now onto a little reflective element. My time as VP-Ed has brought about a lot of changes within myself, and hopefully, I have been able to make an impact on the Society and the make things better for students. My work with mental health awareness has been one of the most difficult, but most rewarding experiences in my life. After my first presentation last winter, the response and support that I received was amazing. However, putting myself out in the public's eye took a toll and sent me into a tail-spin where I ended up contemplating suicide. As you can see, I did not attempt, but the thoughts were there. This term, making the presentation did not have the same effect on me, but again, the feedback I received has been overwhelming. There are a lot of people you see everyday that are suffering from depression or other mental illnesses

VPF Report



ADAM MELNIK
OUTGOING
VP FINANCE

What a term it has been!! Thanks to everyone who participated in and organized events, fun was had by all and several lovely lunches were served.

To allow you to get back to preparing for finals I will keep things as short as possible on the business side. Yours truly is doing his absolute finest in managing EngSoc fiscal policy in 2008. I would like to take this opportunity to guarantee you that we are definitely on the road to a balanced budget... but this will not be so without your continued support.

Please submit expense forms with appropriate receipts by no later than Monday December 1, 2008. Expense forms can be found at <http://engsoc.uwaterloo.ca/www/society.php> and hard copies are also avail-

other schools have and the things that they've been able to do to keep them alive. I've learned ways in which some schools reach out to their communities and student bodies and have tried to bring back some of these ideas to Waterloo. I've also learned that it's a really long drive back from Edmonton to Waterloo, and that the University of Regina has a really sweet beer bong (good memories). I've learned what it means to be apart of something as awe-

some as EngSoc. It's the memories of council meetings, Crawls, OTs, semi formals, Genius Bowls, and all the events that we have that I think that I will remember the most. I would like to thank the rest of my exec for all of their support and good times. Lastly I would really like to thank Mary Bland because without her I don't think that I would have been able to do my job. Good luck to the new exec and good luck with finals!

They do not want pity or special accommodations for being who they are; they just want to be accepted for who they are. I hope that by putting myself out there, and letting people know that I suffer from depression, it starts to break down the walls and stigmas that surround these conditions so that everyone can be accepted for who they are and they don't need to suffer in silence.

Also, I would like to thank everyone that I have had the opportunity to work with throughout my term. I recognize that I was not the best leader when it came to directors, but I would like to thank everyone for the work that they have done. You are all amazing people and I hope that you will continue your involvement in the future.

The exec team that I worked with was really a great group. We meshed very well, but were not afraid of having the heated discussions to work things out. Everyone put their hearts into their positions, but a lot of times, it is behind closed doors. I want to thank my fellow execs for the help and support they provided me during our term together.

Finally, I would like to thank Mary. As VP-Ed I didn't have much reason for interaction with her, but I still liked to talk with her, and bring a smile to her face with my quirky humour. She does more for the Society than can be imagined, and she loves every minute of it. She is there to support us in what we do, and understands the difficulties that come with being an engineering student. She knows when we are down because of a poor mark, and knows that we will rebound. She is an amazing person, and I would like to thank her for all of the work that she has done for me and the Society. She will always have a special place in my heart.

Thank you all for your support during my term as VP-Ed. It has been a great time and I do not regret a moment of it. For the younger years, all the best in your terms to come. This is a great place, and I hope that you all will get as much out of your time here as I did. Although I am VP-Ed, I will be the first to tell you that most of your learning will happen outside of the classroom. For the 4th years – winter is going to be awesome! I can't wait!

able in the Orifice. Please ensure that accounts can be balanced well before finals consume our world – get your receipts in!!

Best of luck writing final exams and pursuing your next term of cooperative education! Avoid economic blues by signing up to arrange or attend a WatPUB event. For more information see <http://www.watpubs.uwaterloo.ca/>!

I have had an excellent sixteen months in my role as VP Finance and look forward to joining BSoc in the Winter to help complete two major capital expenditure projects – a computer in POETS and the new EngSoc website! Transitioning is well under way with your new VP Finance Eric Cousineau, who I congratulate once again!

It has been a pleasure serving you. I wish you all the best in 2009!

"In all human affairs there are efforts, and there are results, and the strength of the effort is the measure of the result."

– James Lane Allen

INCOMING ENGINEERING SOCIETY EXECUTIVE REPORTS

Presidential Report



SARAH SCHARF
INCOMING
PRESIDENT

Another term come and gone, and with the new year comes a new set of A Soc Executives. The new team is very excited to continue the great work that has been done this term by the current exec, and to bring in our own new ideas. I know that this round of executive will do an awesome job.

I would like to take this opportunity to briefly summarize my plans for my executive term so that anyone with questions, concerns, or comments has a chance to let me know before I get started in January. Other than continuing to be the solid voice of Engineering Society, I will be supporting my VP's in their goal to increase awareness about our society and

what we do for UW Engineering Students. I am also going to work with the Faculty of Engineering and the K-W community to increase the amount of engineering student involvement with the community, an example of this being the hosting of charity BBQs during sporting events on the weekends during the summer term. I will be planning an inter-faculty event to promote friendship between Engineering and other UW Faculties.

I am going to work closely with other UW student groups to bring entrepreneurs, politicians, researchers, and general industry experts to give seminars for UW students on the topics that are interesting to you.

Please let me know of any comments you have regarding my plans. I'd love to hear what the members of our engineering society think about these ideas. Good luck with exams everyone, have a great holiday, and we'll see you in the summer!

VPF Report



ERIC COUSINEAU
INCOMING
VP INTERNAL

Hey everyone, I want to start off by saying I am super excited to get started as VP Finance. I would like to thank everyone that supported me during the election, I really appreciate it. I also want to congratulate and extend my support to the other new exec. I am a really approachable person that enjoys answering questions, so if you see me in the halls, please stop me and ask any questions you may have.

The main goal that I set for myself is to increase the appeal of Novelties to students. I have a few deliverables for this; one of them is to run an online survey asking students questions about what they want from Engineering Novelties. Hey, someone has to use that Survey Monkey subscription. Another

related goal is to look into replacing the current Novelties sign (A Poster) with something a little more professional (Similar to the C&D Sign). We also recently held a Novelties sale in CPH Foyer, I want to hold these at least once a term.

When we return in the spring term, we will (fingers crossed) have a brand new website. Included in this will be an online Novelties store, allowing sale of items when the store is not open. This will require new policies to be put in place, but will allow for more efficient operation of the store.

I want to change the direction of the investigation of adding more Event-A-Trons around the engineering campus. It was determined that having these new billboards outside caused too many problems, so I would like to add them inside if possible. I have selected 5 possible locations; two in RCH, one in E3, one in DWE, and one in E2. I would like to see a screen in every building, including E5 when it is finished.



VPI Report



TIM BANDURA
INCOMING
VP INTERNAL

Yay! My first report! First things first. I'd like to congratulate my fellow exec on their campaigns and their success, and I look forward to an amazing next 16 months!

Secondly, I'm really excited about being your next VP-I! I really hope that I will get to work with a lot of you. Anyone is welcome to drop by, introduce themselves, and chat!

I thought I might give you my goals for the next couple terms. I'd like to work closely with my directors. Staying in touch with them to make sure everything is running smoothly and that any conflicts can be quickly adverted.

I also want to spread enthusiasm throughout the student body and increase attendance at events!

So now for a huge announcement: DIRECTORSHIP APPLICATIONS ARE NOW OPEN!!! Go online and take a look. There's a ton of opportunities. Any previous experience you may have in anything can be applied to a directorship! But even if you don't have experience, and want to get involved, send in an application! We'll pair you up with someone who has experience. Go online now to <http://engsoc.uwaterloo.ca/www/directorships.php> for a list of directorships. Click on any links of directorships and you can get a brief description. If you need more information, just drop me an email or stop me in halls and ask! The deadline to apply is December 1st!

Good luck with your finals!

VPED Report



DAVID LIU
INCOMING
VP EDUCATION

Hey A-Soc,

Thank you so much for all of you who supported my campaign and voted for me. As you may know, the VP Education election had a hard fought campaign by 4 nominees. I would like to congratulate Anish Bhutani, Jessica Friesen and David Morris for a successful campaign. Each of these individuals is so involved in Engsoc in multiple ways and they are the people who keep our engineering society going forward. They had many great ideas on their platform. In the coming 16 months, I'm looking forward to work with them to make their goals come true.

I would like to thank my classmates who supported me through this campaign and believed that I'm capable of doing this job. Thanks Calvin, John, Rohan, Hari and all of you...It's really exciting for me to start this job knowing that so many of you support my initiatives. It really empowers me but at same time, it gives me a load of responsibilities too. And for those who did not vote for me, I will be your VP Education too. Drop me a line at s14liu@uwaterloo.ca with your suggestions or ideas and I will listen to you.

Jeff Lipnicky has done so much for us as our current VP Ed. I'm currently learning from

him the work he has done and transitioning into this position. As well, I'm also getting in touch with Sasha Avrelina, the B-Soc VP Ed, to make sure that we are on the same page.

At same time, I have my goals.

#1. Emphasize the roles of academic class representatives. I believe these people can bridge the gap between the students and professors. I would like to have tri-weekly meetings with all the class reps to keep them updated and in turn keep everyone updated.

#2. I would like to start peer-tutoring/extra help sessions where upper year students volunteer to help out 1st year students in their courses. I will work closely with the 1st year undergraduate office to coordinate these sessions. If you want to teach, email me.

#3. I want more engineers to be involved in our society. I'm looking to support various Engsoc events and increase the diversity of our society. One way is to improve communication to all engineers. Each student should know what Engsoc is up to. Class rep can really spread the message here.

So these are some of the things in my mind as I look forward to coming 2009 terms. If you think that you want to be part of this society and take the lead, be sure to apply for Engsoc directorship. It's a good leadership experience that is worth taking on.

Lastly, if you see me around in the hallway, say "hi". I might be in a rush for something but there's always time for a minute chat.

VPX Report



MIKE MCCAULEY
INCOMING
VP EXTERNAL

Hey Everyone!

Firstly, I'd like to thank you all for your support during the elections and I'd like to congratulate the rest of the incoming exec. I'm very excited about representing A-Soc for the coming terms! Please feel free to send me an email (asoc_vpext@engmail) or stop me in the hall if you ever have any questions or input you'd like to share.

I'm really excited about the position of VP-External and I'd like to share some of the goals I have for the term. The first

item I would like to improve is communication between external organizations and society members. I hope to accomplish this by providing clear updates during council meetings. Along the same lines, I would also like to encourage student involvement in external student organizations. The opportunities are endless and I want to ensure everyone is made aware of them!

Onto directorships. I would like to encourage everyone to apply for directorships as I believe it is a great way to get involved with the society and have some fun! I'm looking forward to all of my directorships but I am particularly excited about Competitions. This is an important directorship and I am going to be working closely with the Competitions directors to

ensure students are aware of all the opportunities. As one of Canada's top Engineering schools, it is important that we are represented well at competitions and I look forward to improving our participation on the provincial and national levels.

Finally, the CFES Annual Congress is coming up at the beginning of January and we have an energetic delegation prepared to represent A-Soc.

I wish everyone the best of luck on your final exams! See you in the Spring :)

WEEF Report



BRANDON DEHART
OUTGOING
WEEF DIRECTOR

First off, the Funding Council's decision has been ratified and can be found below. The amount of requests for funding has stayed high for a number of terms now, almost reaching \$290,000 this term. The full details of the proposals will be available soon on the WEEF website, along with the decisions and proposals for all of the terms that digital records are available for. Congratulations to all of the labs, groups, and teams that have received funding this term. Proposals not funded do not appear in the table below.

Second, I would like you all to know that Jay Shah has been ratified as the incoming WEEF Director for A-Soc and will be taking my place as soon as this term has finished. He will be working from our new office (in case

you don't know we've moved) across the hall from the Orifice. As long as I've known Jay he's been determined to share the benefits of WEEF and its impact on every undergraduate engineering student's education and experience at the school, so I know he will make an excellent Director for the Foundation. Please join me in welcoming him to the position.

Finally, this will be the last report I ever make as the WEEF Director (although likely not the last time you hear from me). As such, I would like to say that the last three A-Soc terms when I have been in this position have been great. Sometimes taxing, but always enjoyable and it has been an inspiration to me that so many of you can see the benefits and reason behind a group of students being able to support and make decisions about how their education will happen. Thank you all for the help and support you've given me in my time as Director and I wish you all the best.

Proposal	Requested	Allocated
Architecture		
ACM Laboratory Computers	\$46,791.36	\$10,638.40
Chemical Engineering		
New Mass Flow Controllers for Fuel Cell Set-up	\$3,400.00	\$3,400.00
Civil and Environmental Engineering		
Microscopes and Stirring Hot Plates	\$18,000.00	\$2,600.00
Civil Undergraduate Lab Computer Upgrade	\$15,000.00	\$12,000.00
New Civil Engineering Projector	\$5,800.00	\$2,000.00
Electrical and Computer Engineering		
Motor / Generator Sets and Patch Cables for Power Lab	\$7,582.46	\$6,682.00
ECE Lab Equipment For The Circuits and Devices Courses	\$12,540.00	\$6,270.00
Mechanical and Mechatronics Engineering		
K&S 4129 Wire Bonder Components for ME597, Intro to MEMS	\$6,001.00	\$2,196.00
Mech Eng 4 th Year Room Amenities	\$950.00	\$400.00
MME Computers for 4 th Computer Room	\$11,797.00	\$1,311.00
MME Furnaces for Materials Courses	\$9,786.00	\$4,893.00
Stress-Opticon: Instruments For In-Class Stress Analysis Demo	\$1,200.00	\$1,200.00
Nanotechnology Engineering		
Probing Station For The Clean Room	\$12,387.00	\$9,290.25
Systems Design Engineering		
Bench Equipment for SyDe Teaching Lab	\$4,097.50	\$4,097.50
Departments Total		\$155,332.32 \$66,978.15
Engineering Student Teams		
Waterloo Off-Road Mini Baja Team (Wombat)	\$2,500.00	\$755.00
Chem-E-Car	\$2,480.00	\$2,000.00
Clean Snowmobile Team - Sound Level Meter and Trailer	\$11,393.00	\$2,000.00
Formula SAE Team	\$4,000.00	\$2,700.00
Midnight Sun Solar Race Team: Battery, Workstation, And Mppts	\$13,000.00	\$3,000.00
Mars Rover Challenge - Space Society	\$3,000.00	\$1,300.00
(UW) ² TT - Neo II Parts and Competition Fees	\$6,160.00	\$1,890.00
iGEM Competition	\$2,400.00	\$600.00
UW Robotics Team - WatBot	\$2,920.00	\$1,980.00
UW Nanorobotics Group	\$6,000.00	\$1,000.00
UW Alternative Fuels Team	\$4,045.00	\$950.00
Student Teams Total		\$57,898.00 \$18,175.00
Grand Total		\$213,230.32 \$85,153.15

Official Election Results



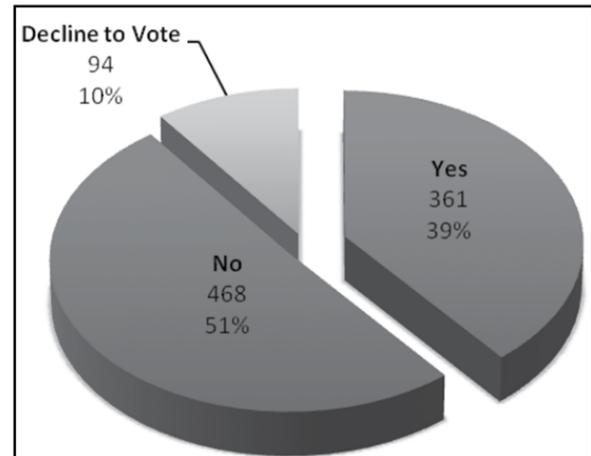
JEFFREY LIPNICKY
CHIEF RETURNING
OFFICER

The results are now final. As I mentioned in the last issue of the IW, there was a vote at the previous EngSoc meeting to accept the election and referendum results as being fair and equitable. Council voted unanimously to support the election process and now, the results are binding.

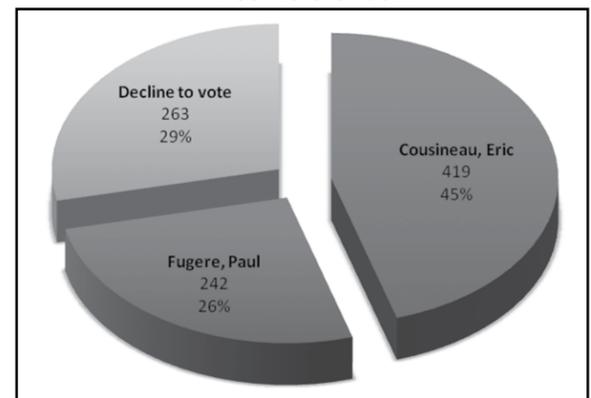
So the results are presented here in this issue. The pretty pie charts show the voter numbers and percentages. The final

voter turnout was 28% (924 responses) - a record in recent memory. Typically the turnout is at most 15%, so we have doubled the return rate. It is important to note that a number of students selected "decline to vote", which implies that not enough information was available to help people make an informed decision. However, the students still took the time to participate in the democratic process.

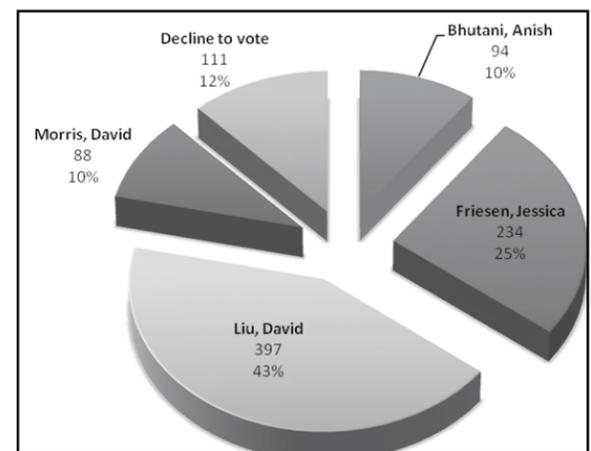
If anyone has any questions, please do not hesitate to contact. Congratulations to the winning candidates. Also, I would also like to thank all of the candidates for stepping up and putting their names forward. It takes a lot of courage to do, and I hope that you will all stay involved!



Fee Referendum



VP-Finance Election Results



VP-Education Election Results

Iron Warrior Staff Appreciation Corner



STUART PEARSON
EDITOR-IN-CHIEF

Wow, where has the term gone? It has been a long journey since I first began as Editor, but has flown by in such a hurry. My grades and social life have taken a bit of a hit this term, but it has definitely been one of the most rewarding experiences I've ever had. There is an enormous sense of satisfaction to be had from working so hard and having something tangible to show for it at the end of the day. I encourage all staff and other engineering students to get more involved in the paper, maybe even think about being editor someday. I have love this newspaper and the privilege of being its editor has been truly amazing, but now it is time to pass the torch along.

Enthusiasm is dangerous in *the Iron War-*

rior. Traditionally, the editor is selected because they are the one who cares the most about the newspaper and who has experience writing and helping out. More often than not it takes a little bit of arm-twisting and even the occasional ultimatum- "the paper will die if you don't step up!". However, I am happy to announce that Assistant Editor Michelle Croal in 2B Chemical has accepted the position as Editor-in-Chief for the upcoming Spring term. She has been an outstanding help this term and the paper owes a significant amount of its success this term to her efforts. I certainly could not have done it without her. Please take the time to congratulate her; I have the utmost confidence that she will do a fantastic job.

Thank you to all of the staff who contributed this term. Your enthusiasm was incredible and your writing output was of such quality that I always felt proud to publish our issues. The writers are truly what make *The Iron Warrior* the amazing paper

it is, keeping our high standards of student journalism alive. I see a lot of enthusiasm, especially amongst some of the younger staff, which bodes well for the future of our paper. *The Iron Warrior* should be in good hands for some time to come.

At the final staff meeting of the term, we announced the winners of the Editor's Award and the Iron Pen. Congratulations to Michelle for winning the Editor's Award, for being the person who helped out, showed the most enthusiasm and also contributed many great articles. She wrote a number of well-researched, insightful articles, and showed her dedication by coming in on weekends to help out. The Iron Pen is awarded to the staff writer who contributes the most content, and this term has been given to Trevor Jenkins for submitting 10 articles totaling a whopping 5841 words. He consistently puts out great content, even when I ask him to write it at the last minute after the deadline!

Thanks to all of the staff who helped out this term, especially layout editor Trevor Jenkins.

Thanks to Bahman Hadji for his unfailing wisdom and extensive proofreading.

Thanks Dave Morris for his help, especially at the beginning when I was lost and confused.

Thanks to the EngSoc Exec for all of their support.

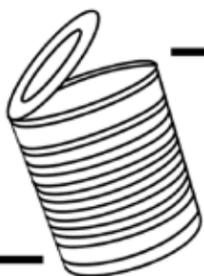
Thanks to Mary Bland for just being Mary and for taking care of all our money.

Thanks to our graduating staff, especially Rory Arnold and Eric Blondeel for their consistently great output. *The Iron Warrior* and its readers will miss you.

Thanks also to the vending machine in E2 for keeping me alive at 2am on Saturday nights during production weekends.

Thanks to friends, family, and classmates for putting up with me.

Lastly, thanks to all of our readers- without you, there would be no Iron Warrior.



The IW Eye In The Sky

Page 2



Murder on Campus?

Page 3



The Tin Spatula

Page 4

Mmm, that's good satire.

THERE WILL BE CONTROVERSIES!

The End of The Iron Warrior

STUART PEARSON
STAPLER-IN-CHIEF

It is with heavy hearts and sincere regret that we inform you of *The Iron Warrior's* end. After a thorough analysis of our situation we have concluded that it is in the best interests of UW Engineering students that *The Iron Warrior* cease operations at the conclusion of the Fall 2008 term in response to the changing demand for student media. By the end of a six-hour meeting, the Advisory Board, consisting of past and present staff as well as the Engineering Society executive voted unanimously in favour of terminating the paper's existence.

Several events have contributed to these unfortunate circumstances. Market conditions for print newspapers have sadly declined in recent years due to the rise in internet news sources. When so much information is so readily available at one's fingertips, it makes trudging through a physical copy of a newspaper seem like a waste of time. *The Iron War-*

rior is a dinosaur, the last sad remnant of student journalism within the Faculty of Engineering. Other campus publications including Imprint, MathNews, and the Boar will be forced to fill the void, but none will be quite the same.

The most significant factor in the decision to fold the paper has been a new business opportunity that has appeared



during this term. During the previous winter term, the Civil Engineering Department acquired a brand new heavy-duty stapler through the generous support of WEEF. The stapler was intended for use by civil students at their assignment drop boxes on the second floor of E2.

See **END IS NIGH** on Page 2

Engineering XIV Construction Looms East Side Mario's to Host Two New Engineering Disciplines

JON RADICE
2B CANNELONI

Furthering their pursuit of Excellence, and after exhausting all green space on campus, UW engineering have slated for those three booth seats at the corner of the East Side Mario's dining hall to become part of the latest expansion.

"Catering to the new industries emerging in today's fast-paced economy is what Waterloo Engineering does best." Exclaims the visionary Doctor Mario Ugonnaetdis. "It seems that modern university students are malnourished. Subsiding on diets consisting of cheap beer and chicken-flavoured ramen can no longer keep the creative juices of these students competitive."

The building will house the two new divisions of Engineering; Mealogical and Sauecatronic classes will join the ranks of the other hallowed divisions of UW Engineering. While Mealogical Engineering focuses more on the design of a balanced diet: menu construction, platter arrangement and spice consulting are some of the emerging hot-button fields of study, but the emerging Sauecatronics seems to be grabbing the attention of many students on campus.

"It's a fascinating field that has a massive impact on society. When our world turns into a nuclear wasteland, what are we going to be focused on? Rebuilding roads? Detoxifying

the surrounding? Systems Design? The only thing I'm going to be worried about is if my Fettuccine Alfredo is going to stick to the pot." Says Vito Cannelone, the fiery professor of the new pasta design course.

The introduction of these two area's of study couldn't have come at a better time.

SUNNY NG
LOCATION SCOUT

In the midst of the controversies surrounding the prospect of a new satellite campus for the University of Waterloo in Dubai of United Arab Emirates, last night the university senate made a shocking move and voted unanimously in favour of amending the current plan to change the future campus location to Guantanamo Bay. This new plan would involve building a new campus within the U.S. detention camp on the shore of Cuba. "I too am surprised that I voted for this, but at this point I really don't give a shit - I just want to go home!" complained an Environment senator as he anxiously hopped on to his Toyota Prius hybrid on his way to shop for some organic vegan groceries from local farmers as the debate cut well into his dinner time.

Last night's debate was a long one as neither the proponents nor the opponents were willing to back down from their original position and the discussion soon turned into a deadlock. It began at 5:00pm and went on into the night. Finally, at 11:00pm, a confused and neutral-positioned Engineering

senator motioned to amend the plan to change the new campus location to Guantanamo Bay out of frustration. The room suddenly went dead silent as senators looked at each other with confused looks. Loud exclamations of "This might actually work!" were observed as the senate quickly decided to vote in favour of passing the amendment.

When asked about why he supported this last-minute shocking amendment, UW President David Johnston answered, "Well you know, by having the campus in Guantanamo Bay instead of Dubai, the university can cut down a lot of its costs as Dubai is an expensive region to invest in. Continuously cutting down expenses while still raising tuition fees is really what UW is all about. Oh and so is being on top of Maclean's rankings every year somehow too, I guess."

Acting Engineering Dean Leo Rothenburg also welcomed the idea as he explained, "Saving money is important for our Faculty. These new buildings (Engineering V, VI, and VII) aren't going to paying for themselves. Neither would BlackBerries, even if they finally decided to jump on to the touchscreen-smartphone-with-app-store bandwagon."

See **GUANTANAMO** on Page 2



Stuart Pearson

Fresh in all of our memories was the horrible deep-dish incident that occurred less than a year ago. Four engineers competent in their field thought they could handle a couple of

Godzilla Deals from Twice the Deal pizza. Poor crust design coupled with an overbearing load of pepperoni and mushroom caused the cheese to sheer right off of its support. This undercalculation made at the hand of non-professionals cost the men their fresh engineering leathers severely stained. There

were no survivors.

Seeing this accident as a warning, the Pizza Engineers of Ontario were created as the best way to govern such potentially life-threatening late-night meal choices. PEO chair Mamma Josephine Risotto explains "Food is essential to our life. Having unexperienced and potentially dangerous people working with no knowledge of the dangers in food preparation is just recipe for disaster. The PEO was created to give some reassurance to the people that are affected by such large food projects." Asked about the prospect of an "onion-ring" ceremony, Mamma Risotto beat me with a wooden spoon and told me to get serious.

Before the school even kicks off its inaugural year, expansions are in the midst. "Campus pizza is a good coop partner," says the interim Dean. Asked about the possible inclusion into the Dubai Campus, the Dean responded, "I don't think that would be a viable option. If Ramadan fell on the finals period, what would we do then?"

When asked about the relatively small building, Dr. Ugonnaetdis did not seem concerned. "It's still much bigger than that new Nano Engineering building. Did anyone ever figure out where they lost that thing?"

IW Eye In The Sky

THE TIN SOLDIER
"NEWS" BUREAU

This just in: thanks to WEEF's generosity, *The Iron Warrior* now has an exciting new way to cover events that happen on and off campus. Coming to Waterloo just in time for the upcoming term, *The Iron Warrior* Eye In The Sky chopper will bring a whole new angle to news coverage. Hostage crisis atop the Math building? High speed chase around Ring Road? Summoned at the last minute to a PEO meeting in Guelph? We've got it covered.

A helicopter previously used by a local tv station was somehow picked up

off eBay for a tidy sum of just \$200,000. Though none of the paper's staff are properly qualified to operate the aircraft, and it appears to be in questionable condition, Editor-in-Chief Stuart Pearson laughed at the issue. "You'd never catch me in that thing. We'll just send frosh up," he said, "As long as they wear their hard hats everything should be fine!"

It is hoped that the *IW Eye in the Sky* will help give *The Iron Warrior* a competitive edge in the heated campus journalism market. "Imprint may print in colour every week, but they haven't got one of these!" cackled Pearson, "Eat your heart out, MathNews!"



The *IW Eye In The Sky* off to cover the latest big scoop

The Paper's Last Days

END IS NIGH from Page 1

Several weeks into the term, catastrophe struck when the stapler broke. For days it sat unrepaired, before a disgruntled student finally destroyed it, ripping out the spring and destroying the staple mechanism.

It was in this time of crisis for the Civil Department that a shining opportunity appeared for *The Iron Warrior*. The IW office, situated adjacent to the Civil drop boxes became flooded with requests by distraught students who needed to staple their assignments. The mighty Iron Stapler was called into service. The department recently replaced the drop-box stapler, although that too fell victim to vandals. Only the Iron Stapler remains.

An intensive cost analysis was performed and it has been determined that by charging a rate of just \$0.10/staple, *The Iron Warrior* will recoup its entire operating budget for the term within a month. Clearly a more profitable operation than advertising, the financial

implications of the switch to stapling are immense. As this is the final issue of the newspaper, operations exclusively as a stapling service are expected to begin this week, and are expected to be fully underway by the end of January.

When told about their newspaper's untimely demise, many students around the school expressed their sadness, tearing up in nostalgia. Recently-appointed Editor-in-Chief of *The Iron Warrior* for the Spring 2008 term, Michelle Croal expressed her disappointment, but conceded that the change will ultimately be for the better. "I was really looking forward to being editor, but I think that stapling will have its perks too," she said, "At least I won't have to pull any all-nighters like previous editors..." Reappointed Stapler-in-Chief, Michelle has an exciting term ahead of her next summer as the first member of A-Soc to operate the stapling business full-time.

Ongoing Satellite Controversies

GUANTANAMO from Page 1

He also liked the idea of increasing diversity and differentiating UW students from other engineering schools through any means possible even if it doesn't really make sense, as evident with the introduction of PDEng four years ago.

The plan to build a new campus in UAE has been hottest and most talked about topic on campus and on Facebook statuses within the Waterloo network for the last 3 months, with the exception of the U.S. presidential election. The main arguments against this proposal have been that this new campus would not have the same working conditions as in Canada and that it would infringe rights set by the Ontario Human Rights Code, including the discrimination of homosexuals and women. An anonymous source from Guantanamo Bay mentioned that this would not apply to the new

location, he said, "In fact, unlike the UAE, homosexual behaviour is often welcomed and practised... in the shared showers." He went on to mention how everyone is treated the same on the grounds regardless of gender and sexual orientation.

Campus interest group WPIRG expressed concerns about the alleged torture acts that are going on in the camp and that UW students of this campus may be subjected to it. However, many engineering students disagree that this wouldn't be an issue, as they don't believe it could be worse than the Phys 115 and 125 midterms and the ECE 241 labs.

Responses from the Facebook group that was against the Dubai campus have been overwhelmingly positive, as all they really care about is discrimination of those within the LGBT community. A representative of the Federations of Students could not be reached at this moment.

Harper Wins Historic Victory

DANE CORNEIL
TIN SOLDIER POLITICAL ANALYST

Stephen Harper claimed an historic win last night, becoming the first white male to be elected for a second time in the 21st Century.

Congratulations came quickly from world leaders, as newspaper headlines worldwide proclaimed the momentous event. Many seem hopeful that Harper will improve foreign relations and Canada's image in the world.

Harper's message of hope and change struck a chord with many Canadians. As well, many were impressed by the positive nature of the Harper campaign. For instance, in a recent 30-minute ad that Harper produced for CTV, he did not mention his opponent's name. Instead, he focused on his vision for the future of Canada. As well, Harper inspired millions of young Canadians, many of whom contributed to his campaign. As a result, Harper commanded a striking majority

of first time voters.

To many, Stephane Dion was seen as the last, best hope of the embattled Liberal Party. With his reputation as a "maverick", Dion was known for working across party lines. However, towards the end of the campaign, Dion behaved in ways that seemed increasingly erratic to the electorate.

Perhaps the most criticized decision was his partnership with Green Party leader

Elizabeth May. May was initially viewed favourably by voters, many of whom welcomed her candor and references to "Joe six-pack Canadian". However, as the election wore on, some began to question her experience. May became embroiled in a number of scandals, including large bills for composters charged to the Green Party, and her involvement in the building of a "bridge to nowhere" (Nova Scotia). May blamed much of the bad press on sexism in the media.

Cynics believed that Dion's partnership with May was meant to appeal to women voters (in particular, disaffected Belinda Stronach supporters). Others suggested that Dion hoped to energize the Liberal Party's base by reaching out to May. Christians make up a large proportion of this base, and many vote based on faith-based issues such as poverty and environmental stewardship.

The importance of this group was shown by the first major candidates' debate, which took place in a Toronto-area megachurch. Candidates were grilled on their stances on homelessness and a potential carbon tax. Christians remained wary of Harper throughout the election, many citing a remark early in the campaign that big-city Canadians "cling to blue boxes and public transportation".

Towards the end of the election, May and Dion became known for increasingly raucous rallies. At one, May accused Harper of "pallin' around with corporations". At another, Dion was forced to correct a woman who accused Harper of secretly being an American. Dion assured the woman that Harper was not, but rather was "a good family man with whom I have honest disagreements".

In the end, the election drew the largest voter turnout in recent history. Voters on all sides were engaged and energized by the democratic process. This was particular evident in contrast to the simultaneous American election, which proved once again to be uninspiring.

Basic Break-Its Havoc How-Tos



MICHELLE
CROAL
DEMOLITION EXPERT

Who cares about fixing things, when smashing them is that much more fun!? Here's a by program breakdown to help you if you're new to the business of wreaking havoc.

CHE: Lots of chemicals easily available at your local pharmacy or garden store, when combined in powdered form and supplied with heat, produce excellent results. Do some research and go shopping.

CIV: Schedule a hurricane, tornado or earthquake of sufficient power and your structures will fail (unless you were really a keener and designed for the 1000 year flood instead of the 10 year flood).

ENV/GEO: Remove all those biofiltra-

tion ponds you put in place and let toxins accumulate in the ecosphere. Strip mine everything without proper reinforcement to help cause massive mudslides when your civie friends host hurricanes.

ECE: A couple of viruses and an attack on the power grid are all you need to have a good time.

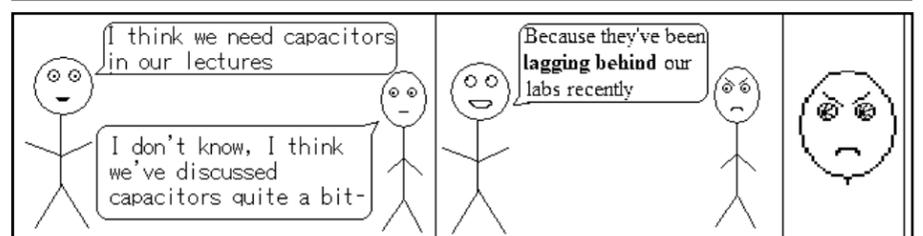
MECH: Sledgehammers are fun for small scale general smashing, but if you're feeling a little more ambitious, build a trebuchet. If they can turn 1000 year plus old castles into popcorn, think of what they can do to your roommate's dirty laundry that's threatening to take over the house!

TRON: Since you're so good with robotics and you won't stop talking about that Transformers movie, build a giant evil robot. They can reduce cities to rubble in minutes.

SYDE/MAN: Why should you do any work when you can delegate?

ECE Lectures

DAVID MORRIS
2B ELECTRICAL



The Tin Lurker

Where: Imprint Office
When: Their Last Meeting

♂ : So, how can we make our next issue even more disturbing than last?

♀ : I had an idea about a sexual positions article, or perhaps a condoms ranking? It could compliment the Maclean's ranking

♂ : That sounds awesome! I can get that featured on the front-page banner if you like.

Where: CPH Foyer
When: Wednesday at Lunch

♂ 1: Hey you with the hat, you know you want some GradComm Pizza!

Aside, away from male 1

♀ 1: OMG, he is so annoying. He turns everything into "about the microphone"

♂ 2: I know eh? I just want to take that microphone and destroy it.

♀ 2: Are you kidding me? It's [Male 1]! I would do anything for [Male 1]!

Where: E3
When: Thursday

♂ 1: I hate my life.

♂ 2: Why?

♂ 1: My girlfriend just broke up with me.

♂ 2: What? Since when did you have a girl friend?

♂ 1: Since Monday.

♂ 2: Who was she?

♂ 1: June Lowe.
Awkward silence

Where: Imprint Office
When: Tomorrow, at their next meeting

♂ 1: *The Iron Warrior* is making fun of our Campus Creeper with this "Tin Lurker" thing.

♀ : That's B.S. They always copy things from us. We're the only ones here who should be stalking people, hiding in bushes, copying down every word of their conversations!

♂ 2: You know, when you say it like that, it makes us sounds like stalkers.

♀ : Your point?

Murder on Campus

THE TIN SOLDIER
 IW BIRDBRAIN

If you've been by the "Parking Lot C" on Seagram in the last few weeks you might have noticed a lot of Big Black Birds. They're flying around, landing in the trees, and there are LOTS of them. What's up with that?

It turns out that these birds – crows, actually – are known to congregate in large groups called "murders". Sound scary? It is. I wanted to get to the bottom of this mystery, so I went to Google and came across a post called "Lighting changes and the effect on the Auburn NY crow roost" by Steve Johnson. It turns out that between 25,000 and 50,000 crows are meeting up in the wintertime somewhere in Auburn NY!

Here's what Steve came up with as an explanation:

"In the last 10-15 years, crow roosts all across North America have changed their winter roosting locations from country/wooded areas to urban settings. Experts generally agree that the crows are attracted to a particular area to roost for a number of reasons. Among these are the following:

- Crows are very social. In winter months they seem to gather at night to "discuss" where the best source of food was found during the day.
- Downtown areas are warmer in the winter months and can offer more shelter from wind than the countryside.

Crows also prefer to roost in trees along moving water due to the air above the water being generally warmer.

- Many "Old Growth" wooded areas which crows preferred to roost in the past have been cut leaving crows to find new winter roost sites. Older trees can be found in city's cemeteries, parks, school campuses, and along city streets.

- Lights allow crows to see predators at night such as owls, and lighted skies allow the members of the roost to flee from danger. Lights also extend the crows "Social Hour". I have observed crows in the well lighted trees communicating and moving from branch much later than the crows who roost in trees with little or no lighting nearby."

Wow, that wasn't so hard to solve. These crows are just looking for a party!



Work Term Reports

A Drink-By-Drink Analysis of Performance vs. Beverage Consumption



We've all been there. It's the night before a work term report is due, editing away, fiercely trying to come up with some valid conclusions and recommendations before it's too late to get the thing bound and handed in. It's at this point when you sigh to yourself and get the sudden urge for a cold brewski to soothe your tired brain. You've considered it, and many of us have done it, opting to down a few to make the typing go by a little faster and to enhance the sex appeal of your summary. For some, it's a good way to take a little break and calm down a little. For others, it's a huge don't with such a big assignment. But as the night wears on, you start to consider the pro's and con's of this choice carefully. Be-

fore you crack one open, you'll likely wonder what kind of effect will this have on your performance. Well, Chad Sexington has done a little legwork using a random engineering population to find out just how far a few cold ones will go toward improving your grade from a Resubmit to an Outstanding, and to help you with that tough past-last-call decision.

As you will notice from my pretty graph, there is a clear correlation (but probably not dependence) between the number of brewskis consumed and the quality of work produced. Although the general trend points towards the fewer the better, you'll notice a significant increase as we move higher in numbers. It's at this point you'll be thankful for the auto correct feature built into your word processor.

So next time you're down to the wire, up late and working hard, don't panic. Take a little breather. At least you can look back at this article and make a more informed

IW Readership Grows to More Than Three People

Daily Bulletin Acknowledges Our Existence



The Iron Warrior is often said to be the best student Engineering newspaper in Canada, keeping a standard and tradition of publishing news, facts, and thought-provoking questions in an open forum to all students.

For those who do not know, *The Iron Warrior* was first printed in 1980 to challenge EngiNews, a purely satirical publication much worse MathNews, and with a higher PG rating. Publications like EngiNews still tend to be common as the official Engineering Newspaper at other universities, though as stories of *The Iron Warrior's* success spread, more publications are starting to print tasteful columns and actual news, increasing the overall reputation of a stereotypical engineering newspaper.

What does any of this have to do with anything, you ask? As newspapers start printing news articles, its writers and editors start asking the question – one that has been asked by EIC alumni, current, and future alike at the IW – "Does anyone ACTUALLY read any of this?"

This topic came up an IW meeting not too long ago. Stretching the truth a bit, the conversation went something like this:

Person 1: "UW Eng History... Waterloo gets ranked first... does anyone actually read

any of this stuff?"
 EIC: "OF COURSE THEY DO! Everyone has a thirst for such wicked-awesome engineering history!"

Person 2: "I don't know, it's all kind of lame. You know what, I think we should just stop writing articles now. I think we should go on strike!"

While our ballots were never cast, it turns out that it is a good thing that we did not go on strike. Just over two weeks ago, in a small corner of a website, the IW got a taste of acknowledgement from the outside world (i.e. beyond UW Eng*). The Daily Bulletin linked to an article on the IW website regarding the planning of the new E6 building, which will be the new home of the Chemical Engineering department, and also allowing for a complete overhaul of DWE.

This caused much celebration in the IW office, as we, the writers and contributors, finally felt that we accomplished something by slaving away for hours writing articles, and putting up with our... LOVING... (cringe) EIC.

So, on behalf of all IW staff, thank-you to all readers, and to the Daily Bulletin (yes, we read you too!),

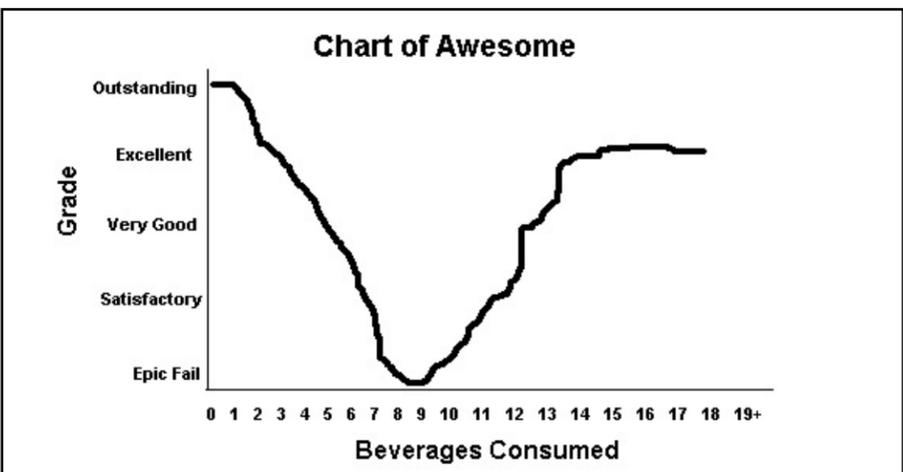
THE IRON WARRIOR LOVES THE DAILY BULLETIN ♥

*MathNews is not considered in terms of "Acknowledgement". Not because we hate you, but because shout-outs to Mike Seliske don't count, and because Software Engineers write for MathNews, thus rendering the publication inside the realm of UW Engineering.

decision about whether an early celebration is the order of the evening. That being said, this data is from a random sample of about 75 engineers of all disciplines, years, and tolerances. So you might want to take that into account before choosing. Remember,

the key to a sexy work term report is to keep your cool and properly cite your sources. Because almost nothing is sexier than a whole lot of IEEE formatting.

Until Next Time,
 Stay Sexy!



Engineering Vocabulary Word Search

Expand Your Mind!

ALEX GIROUX
VOCABULARY ANALYST

Now you can study while reading the newspaper! Enjoy this lovely wordsearch full of terms taken directly from the school notes of Iron Warrior staff.



Word Bank

Full Penetration Buttweid
Shaft
Skin Friction
Suck
Squeeze
Bang
Blow
Head
Headloss
Rigid Member

Cost of Erection
Pullout Force
Impregnated
Lubrication
Rectilinear Motion
Cleavage
Ramrod
Stripper Bottoms
Critical Crack Depth
Stopcock

The Tin Spatula

Columbia Lake Goose

ADRIANA CAMERON
RESIDENT VEGETARIAN

There are many reasons to eat locally grown food. Eating locally-grown food helps to reduce your contribution to global warming, ensures your food is fresh, and preserves genetic diversity of your area, to list just a few reasons. So, why not enjoy a Waterloo-style roasted goose tonight with your friends?

Serves 8

Ingredients:

- 1 fresh Canadian Goose
- 4 litres of Columbia Lake Water
- 4 cups of salt
- 6 tablespoons of ground mustard

1. Catch your goose. Catching a goose requires 8 people, which is convenient because it also serves 8 people. Grab each others' arms and create a circle around the goose you select. Slowly move in, until you are within arm's distance of the goose.
2. Get the strongest person in the group to gently grab the goose's neck and wring it until it stops making noises. At this point it is safe to assume that the goose is dead.
3. After humanely dispatching the animal, be sure to remove the bird's feathers. This step is important because no one likes to eat the feathers.
4. Preheat the oven to 575°F.
5. Combine Columbia Lake Water, salt and ground mustard into a bowl. Place the goose in a large roasting basin and dress with this mixture.
6. Cook for 6 hours. While you wait enjoy the aroma of Columbia Lake with your house guests.
7. Serve with Village 1 cafeteria potatoes and enjoy.

Spending Freeze

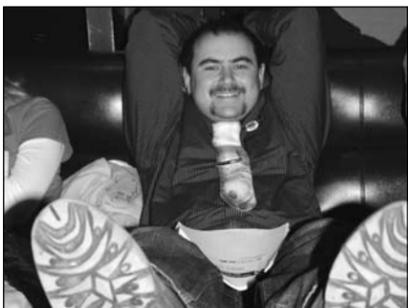
AMIR TALEGHANI
TIN SOLDIER EAVESDROPPER



THE TIN TRIBUNAL

Stuart Pearson, 2A Civil

“Where should the university put its next satellite campus?”



Jeff Lipnicky
4A Mechanical
“Uranus.”



Irab
2A Chemical
“Daytona Beach for spring break”



Rebecca Cameron
2B Geological
“Nowhere! One campus is definitely enough for me!”



Michelle Croal
2B Chemical
“On a satellite!”



Groupies Arts
“Oh my God it's Captain Hammer!”

Hello From Your EngFOC '09

Hello Everyone,

We hope you are as excited about Frosh Week 2009 as we are. We are your Federation Orientation Committee (FOC), and our job is to make next year's frosh week run as smoothly as possible. If you would like to be a part of the week, then you will need to sign up, but first here is a little bit about your EngFOC09!

So those are our stories, still want to sign up to be a BIG, HUGE, EDCOM, or CAMERA/MEDIA PERSON? Please submit your application by going to www.eng.uwaterloo.ca/~foc

*Important

There is a new position this year, its called camera/media. This position will

involve filming during the week as well as the making of 'Meet the Dean', 'Meet the Tool' videos, etc. This position requires some extra work and past experience is appreciated.

**Extra Important

If you would like to be our camera person, a HUGE, or an EDCOM, then you must sign up for an interview. Interviews will start Friday November 28 at 5:30. Sign up in groups of four on the orifice door. Locations will be posted there.

If you are on A-soc, sign up for an interview now. Those of you on B-Soc, there will be more interviews in the Winter term.

Love,
Your 2009 EngFOC



Matt Hunt

A Man of Style, a Man of Passion, a Man of Many Guises. Matthew 'Munt' Hunt is irresistible to women and men alike. Having that charming-yet-alooof air about him, his charismatic presence is impossible to ignore. Known for creating a grandiose entrance, heads turn and envy flares in every heart when his Suave, Debonair and Downright Sexy self arrives. The master of blade craft, technology, and hand-to-hand combat. Trained to the highest level in espionage and covert operations, and soon to be a Mechanical Engineer, this International Man of Mystery straight out of Stratford has seen it all, and done even more. Keep your eye on him, or you might just find yourself drawn into the vortex of awesome.



Mark Cremasco

Mark grew up in the Amazon somewhere in Southern America. At an early age, just when Mark was getting his legs, his mother was killed by hunters. Mark was all alone and eventually was shipped off to live with the Monks in Tibet. He lived with the Monks for a total of 16 years, learning and learning. Little did he know, the whole time he was there, the Monks were fund raising for his airline ticket. Finally, they had enough to send him economy to, of all places, Waterloo. He has now been here for over 3 years and his training has helped him along the way. Because of his deep concentration and lightning-quick reflexes, he has achieved the role of FOC and plans to do wonderful things with it. But don't be fooled by his Buddha-like concentration, he can snap at any moment and retreat to Tibet - any mention of his youth and you will surely feel the repercussions.



Marissa Bale

'Born' in 1988, Marissa was considered by most at the time to be some sort of advanced robotic alien life form. After years of storage in a warehouse somewhere on the outskirts of Barrie, Ontario, she escaped. Forging a path of indeterminable destruction towards more of her kind, located in Waterloo, she arrived to find her programming had been altered. With a peaceful new way of life ahead of her, she settled in for a nice education in Chemical Engineering and for the last three years has lain dormant until such time as her fiery instincts rise once again and cause her to lay waste to the world.



Grant Campbell

Once upon a time, a young prodigy named Grant Campbell was born in a lake up north. Fortunately, being the well-prepared baby he was, he came out wearing a wake board. He then proceeded to do a back flip just because he could.

Soon after his birth, Grant took a job in the Far East, training a young martial arts prodigy by the name of Charles Norris. Apparently this guy went on to be a star in a tv show and a couple movies. Nothing big.

Now a toddler, Grant began to hone his skills as an academic. The earliest work that his name can be found on was helping one William Gates with some high tech

calculator of sorts.

This is the part where Grant's story becomes a little foggy. It seems that he bounced around from bar to bar for several years, only once appearing in Detroit working as a fashion consultant for a young start-up rapper named Marshall Mathers.

After all his work, in the fall of 2005, Grant decided to attend the University of Waterloo to study Civil Engineering. Sure, a weird choice given his experience but look at the rest of his story. As this school can often do to people, Grant began to have difficulty understanding when people told him he was wrong. In fact, he still believes that Thursday is the fourth day of the

week.

Though he did not know it, Grant had a calling in life, one he did not realize until the summer of 2008. When 'The Dark Knight' was released and the world was introduced, for the second time, to 'The Joker'. When this movie ended Grant was so convinced, that he immediately began to tell stories of the time when "I made the pencil disappear". Grant's infatuation with this character still survives.

Grant's life experiences have earned him the responsibility of 2009 EngFOC. Though it is safe to say that nothing he has touched has ever really amounted to anything, even he probably can't screw this one up.

Diving Into the Iron Warrior Archives

A Look At Some Of Our UW Engineering History



The 70s and 80s were a much simpler times. As we dig deeper and deeper into then archives of *The Iron Warrior*, events that seem unthinkable now thrived across campus. Many draw parallels to things that have affected us this term.

The homecoming float of 1971 showed off the ENGINuity of engineers. Consisting of 750 beer cases, the float turned many eyes along the parade route. Unfortunately, the Labatt Balloon didn't make an appearance, but a letter from the company sent their regrets and promised to send many interesting attractions to "tantalise our engineers".

The 70s were not without controversy arising around altercations of FEDS president Andrew Telegdi. Poor communication between Andrew and his executive was cited as the reason for a large number of them resigning. For those who recognize that name, that is the same Andrew who was Liberal

MP for this riding until the last election.

In the 1970s, it was practice to hold a Welcome Back Stag (WBS) at the beginning of every term, which was full of strippers and a comedy night. By 1981, no one could actually remember when it had last broken even. A vote was held to see if its format needed a revamp. 52% said they wanted to continue with the strippers and comedy night, while only 13.5% wanted strippers only. The half percent was attributed to the individual who wanted them to only strip from the waist down. So the stag was booked with strippers and comedy on January 9, 1980. A \$4 ticket got you on the bus and ribald song-books were available for \$0.25 at the door. But it was the poor quality that eventually led to the stag's death as the quality of the entertainment was compared to a night in Breslau.

The frosh of 1983 apparently weren't the brightest of the bunch. While trying to recreate the memorable "BEER" on a water tower incident of so many years past, the frosh never realized that their black shirts would be spotted against the stark white background of the water tower. Needless to

say, there were arrests that year.

October 1986 saw the opening of Davis Centre that saw joy from everyone. Staff no longer had converted hallway space as their "office". However, the real winner were the students who no longer would have class in portables, and the varsity athletes also got their weight room back as it was no longer needed for lectures.

The POETS challenge of May '88 recorded a single day consumption of 32 cases of beer, with the top class downing over 150 of the longed necked bottles. The only damage caused, besides to their liver, was when Bar Services smashed a window in their rush to bring more beer. However, it seems the dean didn't like people going to interviews and high voltage labs inebriated and saw to it that the POETS Challenge wouldn't be seen again.

Traditions that have lived on from the decades passed were also taken much more seriously. In 1974, a letter was received from Rodney Clutterbuck, a city engineer from Eliot Lake, ON requesting a visit from a UW nautical team. Patrons of the arts up north were anxious to view the fine art that

is BOAT racing. Apparently people from Northern Ontario need some of us Southerners to teach they how to drink now and then.

The motto "start 'em young" was never truer at Canada Day 1989. Kool-Aid BOAT Racing was one of the prominent fixtures of that year's kid's events area. No incidents of spiked drinks were reported. But in those days, the real BOAT Racing was still sponsored by Brick Brewing and cost a mere \$22.00 and \$12.00 for men and women's teams respectively so they probably could have afford to spring for something more exciting than Kool-Aid on Canada Day.

These are just some of the more memorable events that happened in our past. There is no doubt that things are comparably dull than in the passed. Before we jump to conclusions and say that this is the slow death of what we "are", it should make us embrace the few remaining traditions we've manage to keep from dying or taken away. The new restraints working against us can be overcome, but how exactly will just take some ENGINuity on our parts.

**With files from Jason Higgins.*

POINT VS. COUNTERPOINT

POINT

Should Greater Restrictions
Be Put On Young Drivers?

COUNTERPOINT



SYLVIA WU
1T MECHATRONICS

It seems that the McGuinty government is seriously cracking down on road accidents this year. The cellphone ban was just revealed in October, and merely a month later a new proposal surfacings to specifically target drivers younger than 21-year-old. The agenda includes:

- The young driver must have zero blood alcohol content regardless of license level.

- No more than one unrelated teenage passenger may be in the vehicle.

- Zero tolerance for speeding: one ticket and the youngest i's off the road.

This proposal will no doubt arouse outcry from the under-21 community. These young grasshoppers will whine on and on about age discrimination. Well, they all will just have to live with it, until you have earned mommy and daddy and big brother's trust by proving that you cannot kill yourself before 21. Besides, should 17-year-olds really be trusted with other people's lives? They cannot even be responsible for themselves just yet. If an accident occurs and the passengers are seriously hurt, or /*insert your own deity here*/ forbid, are the driver's parents responsible, or is the teen driver suddenly an adult and should take all the blame like a grown up? What about the passengers' parents? Should they have signed a consent form? Teens should give given as little responsibility as possible, especially when it comes to other people's lives. Teen lifeguards should, however, remain an exception to this rule, because they add so much more to a beach/pool's scenery.

I will quickly get over the obvious here: this proposal will no doubt make the roads safer. After all, it's all about probability. If young drivers are not given second chances on DUI and speeding, there will be less drivers on the road overall. It is safe to say that the number of accidents that occur is proportional to the number of drivers roaming about. On remote roads where the only car you see for miles and miles is your own, chances are that the only accident you will get into is with a tree or a ditch due to your own stupidity (of course you can blame the weather too but we all know that's just an excuse).

What opponents of this proposal have not thought about is the environmental benefits that it will bring forth. We all know how it is with the kids who just turned 19--they want to drink the bar empty and they do not know limits! Therefore, once the kids who weren't able to drive all their friends around turn 21, they'll carpool the hell out of it! "Stuff the car full! We finally get to use the rear middle seatbelt!" It's all about the sudden freedom and the desire to push the envelope and rebel

against big brother... but this time it's playing in mother earth's favour.

This proposal has already seen its share of controversy, especially among the young and affected. Advocacy groups have sprung up on Facebook, MySpace, and whatever else the youngsters are using these days, urging their supporters to phone local MPPs and address this issue. This proposal inadvertently raised the political conscience of today's to-often indifference youth. Now many are getting a wakeup call that they need to pay attention to politics and use the tool of democracy to their own advantage. It's a great lesson to teach today's kids about what power the government holds (only as much as you, the people, allow it, in theory) and how the common people can affect public policy. The kids affected by this law today will remember it through their life, and hopefully, they will become involved in policy-making throughout their lifetimes.

To sum things up, while the advantage of this proposal's original intention is controversial, it still has an overall merit. The side effects it brings are definitely positive, regardless of the proposal's acceptance and eventual passage or toss-out.



TREVOR JENKINS
1B MANAGEMENT

The McGuinty Government's latest move to protect ourselves from ourselves is a crackdown on young drivers, instead of doing something useful like, say, working to revive the ailing manufacturing sector. The proposal aims to make young drivers, those classified as being under 21 or with a G1 or G2, more responsible by taking away distractions that could limit their abilities.

The most flawed component of the legislation would prevent drivers from having more than one passenger under 19 in their car during their first year of having a G2, with some reservations for family members. Currently, there can be as many under 19 passengers as there are seatbelts. What this will mean is that teens will no longer be able to carpool to the movies, school or the mall. This will greatly limit teen's mobility, especially for those in rural areas where public transit is not existent. Even for those of you from the city- how many times did you get into a car with a G2 driver to go somewhere?

Government officials cite that the 16-21 age group is 3.5 times more likely to get into a car accident than then 30-34 age group. However, it should be noted that the 30-34 age group is the safest driver group traveling on Ontario roadways. Why not impose similar restrictions on other age groups that are more dangerous than the 30-34 group? It's clear that age discrimination is running rampant, and since the majority of 16-21 year olds can't or don't vote, there will be very little repercussions to the government for their actions. For instance, seniors are the most likely group to break their hip but there have been no proposals to require them all to have a walker with them at all times, and wear ice spikes on their shoes to help them stop from falling. Why? Because seniors vote in droves and make sure their voices get heard. The double standard here between voters and non-voters based on age is more than apparent. Legal experts are already expecting that this law will get challenged due to its conflicts with the Ontario Human Rights Code.

Requiring 21 year old and under drivers not to have a blood alcohol of zero is a step forward in my opinion, however it will actually have little impact. Drunk drivers know from the minute they get into the car that what they're doing is illegal but keep doing it regardless. Just because it's illegal doesn't mean people will stop doing it. If it does save innocent lives, then it will be a great step forward for society, however to expect drivers who drink to suddenly realize that what they're doing is illegal is poor policy planning. The root of this problem, unfortunately, is human stupidity and only until that has been resolved do I honestly believe that it will stop. Interim measures like offering legitimate late night transit options in cities and towns will go much further to resolve this than simply saying "you're not allowed to".

However, the biggest problem with this legislation is that it will keep us going down the slippery slope that is the current government has been pushing our society down. Since coming to power, they've already banned us from smoking in cars with their kids, and are working their way to ban cell phones. Despite the fact that neither are things that may be the best for us, we are in control of our actions, and it's up to us to decided whether they're constructive for us. How much longer until we will be required to hold a door open for someone who's within 15 feet of us? I fear the day when the 'Morality Police' ticket me because I didn't say 'bless you' when the stranger on the bus next to me sneezes.

While the new measures being passed by the Ontario Government may provide for slightly safer streets, the fact remains that human stupidity will still trump any law that a government can generate. There are far greater issues that they could be dealing with now than trying to make a couple of dumb teens smarter.



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Editor's Note:

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

Waiting for the Rain

Engineers Without Borders in Malawi

MEGAN CAMPBELL
SYSTEMS DESIGN '07

One of the nice things about being at school in the fall term was seeing the first snowfall through the classroom window. Of course the novelty and wonder usually wore off quickly (I remember one November a Prof. barely took the time to say "How nice" before continuing to berate the class for doing so badly on the mid-term), but waiting to see the first flakes fall was always exciting.

I've been feeling similarly these past few weeks as I wait for the rains to arrive in Malawi. I arrived in Malawi in March this year at the end of the rainy season. On my first bicycle-taxi trip into Dedza town I got caught in a sudden downpour and turned up to my first day at the office sopping wet. Since then there's been no rain and Malawi's undergone such a gradual transformation that I can't remember what it looked like during the wet season. The trees and buses are still green, but the fields and roads have turned dry and dusty.

I'm not the only one impatient for the rains to come. Mrs. Boniface, my land-

lady, is up at 4 each morning to hoe her fields for a few hours before the sun gets really hot. She's racing to prepare her fields for when the rains get here and can't wait for them to arrive. The rains represent food for the coming year. Most of the fields in Malawi aren't irrigated and so farmers rely on the rains - poor rainfall and a poor harvest means hunger in the coming year. Even with good rains and a bumper crop of maize last year, the radio is reporting pockets of hunger in areas of Dedza district. While we were out walking this weekend, Mrs. Boniface pointed out women coming down a path from Dedza mountain with impossibly large piles of wood balanced on their heads, telling me that selling firewood is what many women resort to, to raise money to buy maize when they've run out of their harvest.

So good rains are a vital element of farmer self-sufficiency, but they can also be destructive. In part of my project's working area the soils are very sandy and the rains cause latrines to collapse. When people go 'free range' instead of using a latrine, the rains wash the 'damages' into streams and unprotected water sources, and cholera, diarrhea and other water

borne diseases hit the villagers who rely on those sources for drinking water. Diarrhea kills 18% of the children under five who die each year in Malawi. Malaria (which accounts for another 14% of under-five years child deaths) also hits hardest in the wet season when mosquitoes breed. It's harder (and sometimes impossible) for extension workers to reach many villages as the dirt roads turn to mud.

So I'm waiting for the rains with trepidation as well as excitement. When lightning flashes across the hills at night I can't wait to find out what the wet season in Malawi will bring.

Megan graduated from Systems Design Engineering in 2007 and is currently working in Malawi on a two-year place-



ment with Engineers Without Borders. This is her fourth article in a series on her life in Malawi - for more stories (including how she accidentally crossed the Mozambican border, how she had a rooster as a roommate, and how she is increasingly fascinated with human excrement) see whereismegan.blogspot.com.

The Importance of Engineering to Society



The way I see it, engineers and their practices have been encouraged for one paramount reason: benefiting humankind. In modern society, we are constantly interacting with our environment. We harvest and extract all the resources that we need to sustain human life and culture human empires. It is the role of the engineer, however, to minimise the effects of damage on the surrounding ecosystems, and design necessary infrastructures that are both efficient and safe.

In the media today, people are lured into believing that trinkets and stuff that sits on a shelf and collects dust will solve their woes. In reality, these things are not nec-

essary and only serve to satisfy the selfish and competitive nature of humankind. Engineering focuses on the development of infrastructure that serves a meaningful purpose for humankind.

My observations suggest that the structures and processes engineers implement fall into four main categories: sustainment, safety, cleanliness, and connection.

It is the role of the engineer to protect the environment and the people within it. Engineers aim to benefit the people of the present by employing effective structures that are intended to improve transportation and living habits of earth's inhabitants. By extension, engineering is planning for the continual growth of the human population and ensuring there are sufficient resources for the people of the future.

Engineers must be efficient, taking into consideration construction costs, time, and the wellness of people. In this respect,

they are the role-model for multi-taskers everywhere! When designing a skyscraper or bridge, the team of engineers must ensure the safety of its users. Collapses cause panic and excessive stress. In a sense, adequate engineering ensures support and comfort, not only for the structures, but in the mind of the population.

Engineering manages sewage, wastes, and purification. These points do affect sustainment, but they are also crucial in defining another aspect of engineering's importance. Cleanliness and public health are largely defined by engineering. Without proper engineering and sewage systems, we would no doubt run out of fresh water (much sooner than we are scheduled to), and we could quite literally be living in our own fecal matter.

Finally, a significant focus of engineering is that of connection and globaliza-

tion. As technology and design progresses, it is important that we keep in contact with the rest of the world. The saying "no man is an island" quite literally comes into effect here. Every disaster, natural or not, that occurs in the world today effects everyone. Tsunamis, volcanic eruptions, terrorist attacks; the world is informed of such happenings. Without roads to get from point A to point B, or helicopters, or jets, the world would seem a very distant place. Essentially, engineering encourages a sense of awareness and togetherness.

Engineering serves as the calcium of society today. It continuously strengthens our pre-existing knowledge of design and, as calcium ensures healthy bones and teeth, engineering ensures a healthy and sustainable environment for humankind.

Blast From The Past

A Legend is Born

THE IRON WARRIOR
NEWS BUREAU

Pulled straight from *The Iron Warrior*

archives, this is a copy of an original letter between two presidents of the Engineering Society detailing the acquisition of our beloved 60" Ridgid mascot.

Memorandum
October 1, 1968

To: Mr. M. J. Martin, President, Engineering Society 'B'
From: J. L. Pike
Subject: Crest and Mascot

This will acknowledge Mr. Parson's letter of September 26 requesting details of the status of crest and mascot.

...

The mascot has been received from Chas. Jones Industrial in Hamilton who handled it for the Ridge Tool Co. I have it "some place" in Waterloo and we will present it at the semi-formal dance on October 5th. We are presently determining the cost of high-gloss chrome plating and also securing chains and shackles.

I'm hoping that we can have more details by Saturday for you and your executive. Due to Engineering Week-end I think we won't be able to make your meeting, but we could discuss it over cocktails at the reception (if I'm not too drunk from the Blimiry Milk Run).

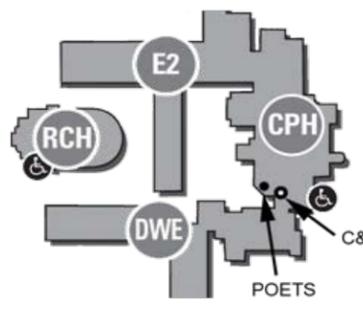
President
Engineering Society 'A'
University of Waterloo

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The Underpants

EngPlay Hits It Again

THE IRON WARRIOR ARTS BUREAU

This term's EngPlay, *The Underpants*, directed by Megan Pollock and produced by Marissa Bale was a surprising, hilarious success. Opening in the first few seconds with a ridiculous case of falling pantaloons, it set the stage for the series of highly hysterical and improbable events to follow.

Theo, played by Junaid Malik, is the stereotype of a "manly man"- arrogant, strong and masculine- comes from a long line of government clerks, has bulging thighs and biceps and works hard at his 9-3 job to provide for rent for a tiny grungy apartment for his beautiful dreamy, young wife Louise, played by Alessia Danelon. It is hers whose infamous panties fall in broad daylight on the boulevard, "to the attention of none!" she attests, while news travels fast and men smitten with lust soon start appearing at the door.

First to arrive is Versati, as portrayed by Kerryck Jones, a tall, dashing red haired poet and hopeless romantic, interested in the room the Theo and Louise have available for rent, but with ulterior motives of getting Louise in the sack. She's swept off her feet by flowery words, and arrangements are only just made when Theo returns with a second potential tenant. Cohen, "spelled with a K of course!" (Graham Hendra) is a bizarre gentleman with a variety of real or contrived illnesses and who may or may not be hiding other things as well. In Theo's brief absence, it is revealed that Cohen also gained a glimpse of the fallen panties and possibly even what lay beyond. He claims to be Versati's barber and wants to protect Louise's honour from his fickle and romantic ways. Klingehoff (Dan Armstrong) and The King (Darcy Parks) also make appearances.

Gerty, played by Erica Waugh, is Theo's and Louise's nosy, flirtatious, sweetheated upstairs neighbour and

convinces Louise that a year of marriage without getting any action is unacceptable. Gerty believes Louise should pursue an affair with Versati. She begins the makings of sewing the Ultimate Panties- softer than skin, just the right length and possibly translucent- towards the goal of making Louise completely irresistible to the man of her dreams. Quite possibly the BEST line of the entire play, Gerty sent the audience into hysterics when she told Louise, "But, you don't even have a baby!" (Anyone who is anyone who was in Frosh Week '08 will know where this came from!)

Schemes, flirtations, subplots and innuendo so stiff you can hardly call it innuendo anymore continue until the climax of the play. (I won't reveal any more details because you should've gone to see it yourself!) The acting and portrayal of all characters was excellent, (except for Louise who seemed a bit two-dimensional at times) and interaction with the audience appropriate and well timed. The characters themselves were on occasion a little strange and contradictory, but it added to the chaotic nature of the plot, with no fault to the actors.

Personally, I found Theo's and Louise's relationship slightly disturbing. Theo's attitude towards his wife bordered on verbal abuse, while she never seemed to argue or even care that she was being treated like a bird in a cage. When her multiple potentials for affection and romance failed with wandering eyes and reality checks, she seemed to return resignedly to the life she had before. Finally, at the end of the play a trigger goes off (not literally) and she FINALLY stands up for herself. In any case, the jokes and situations of the plot distracted enough from this issue to still make an enjoyable play, without being too serious and realistic. And honestly, with never-ending assignments and looming finals, it was good to get out and laugh for an hour!



Iron Warrior staff posing with The Tool at Semi Formal

A Midnight in Paris

A Night Not to Be Forgotten



On Friday November 14th, almost 100 people journeyed through the rain in formal clothes in order to attend this term's engineering semi-formal. South Campus Hall was transformed, in order to create the perfect ambience for a "Midnight in Paris", which was this term's semi-formal theme. Silver stars lined the walls, blue and silver ornaments hung from the ceiling, and the tables were illuminated by the candles and glitter in the centrepieces.

Unlike earlier that day at 8:30 am in class, everyone looked as though they had put a lot of effort into getting ready. All of the semi-formal patrons looked quite elegant, with the exception of those who sported a sketchy looking, half grown, November moustaches.

The night began with an all-you-could-eat dinner buffet. The buffet included salads, bread, chicken, and pasta. The food was so good that many of us failed to save

room for dessert which was unfortunate because there was quite a wide assortment of cakes for dessert.

After we all ate dinner, the draw for the door prizes took place. Prizes included Sigg bottles from novelties, gift cards for Future Shop, and gift cards for Conestoga mall.

Slowly and shyly, we all eventually made our way to the dance floor. The DJ kicked off the set with a few slow songs, and then a few that were a little more upbeat. Everybody danced along to the Beatle's Twist and Shout, and sang along with Bon Jovi's Living on a Prayer. Some rather talented dancers had the opportunity to showcase their skills. I observed a variety of styles of dance, ranging from Ukrainian dancing to break dancing. The dance lasted well into the night, and eventually ended around 1:00 am.

Thanks goes out to the semi-formal directors Kristen Roberts and Muhutareem Siddique who spent the last few months pulling their hair out and stressing in order to ensure that this term's semi-formal was absolutely perfect.



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If you feel your TA is deserving, please submit a completed nomination form (attached) to Shirley Norris in the Engineering Undergraduate Office (CPH-1320). If you would like to nominate more than one TA, more forms are available from:

Shirley Norris, Engineering Undergraduate Office, CPH-1320
s2norris@gmail.uwaterloo.ca

Engineering Society Office, CPH-1327, ext. 32323

E2-3336, ext 84008, sff@gmail.uwaterloo.ca
www.eng.uwaterloo.ca/~sff

ADVENTURES IN ALCOHOL

Better Know A Beer

Smokey Oatmeal Stout: Trafalgar Ales and Meads



RORY ARNOLD
4A MECHANICAL

It's no secret that chemical engineers love beer. Michael Arnold (no relation), class of '75 took his love for the liquid bread when he, his wife and George Hengstman opened Trafalgar Ales and Meads in 1993. Steady growth over the past decade and a half has seen Trafalgar explore new areas previously unknown to the Ontario beer market, such as high alcohol content beers including a barley wine and double imperial India pale ale. They are also one of the only breweries that also produce mead. They are currently in their third location, which has housed their operation for the past 6 years.

I had the opportunity to visit Trafalgar's brewery in Oakville, where I sat down with Arnold in their adjacent pub, the Tied House Pub. Over a few glasses of their Belgium Spiced Ale and Oak Aged Rye, we were able to discuss the current Ontario beer market. Trafalgar annually produces 2000 hectolitres and focuses on brewing specialty beers in small batches for the single bottle purchase market. They are available at the LCBO and cite the King St store as one of their best locations. They offer a wide range of unique styles, which are meant to appeal to those who are looking to try something new and a little more challenging on the palate. Available beers include; their Port Side

Amber, which they are most proud of, Harbour Gold Pilsner, Celtic Ale, Paddy's Irish Red Lager, Elora Grand Lager, Elora Irish Ale, and Elora Special Bitter. They also brew a number of seasonal brews, including Smoked Oatmeal Stout, which I brought home a bottle of. They are also continuously trying out new styles including their newest, Cedar Cream Ale, which is aged in Cedar casks.

Arnold became familiar with the brew-

Arnold points out that most of their customer base buys their beer just to try and even if they like it they may not purchase it again as they will be looking for something else new. This also explains why they brew such a wide variety of beers, as those who like one Trafalgar beer will surely want to try another style.

Like most of our best ME 423 ideas, the workers at Trafalgar do most of their planning in the corner of the pub. One such idea was to help make our Canadian

Oatmeal Stout since I am a lover of both the smoke beer and the oatmeal stout, I was interested in how they could be combined. Pouring the beer in a pint glass, it instantly gives off a strong smokey aroma with hints of coffee that come through after the smokey aroma fades. It pours a cola black with little sign of any head and has a stong, smokey taste with a malty finish. This is a thick beer with a pretty intense smoke flavour, so you should be warned if your palate isn't too strong. This beer was a good complement to my beef stew, but I think it would go great with any hearty meal that includes a red meat. I scored this beer 90/100 for its delicious smokey taste and thick stout character. I bet this would be a great beer to drink on a cool fall evening by a campfire-it sure reminded me of one.

Well, if you're on A-soc, this will be the last time you read my article (unless you go online to iwarrior.uwaterloo.ca) so I just want to thank all of you who read my articles and especially to those who came up to me and gave me great words of encouragement. When I started writing this article, I knew little to nothing about beer and I can tell you, researching beer has been a lot more fun than researching anything mechanical related. I just want to leave you with one last piece of advice; don't be afraid to try something new, take your opportunities on coop to go to new cities, new provinces and new countries and explore the different beers of their culture.

Dum vivimus vivamus.



ing process while operating a brew-your-own shop while working in the nuclear field. He decided to leave the engineering field and enter brewing full time when he opened up Trafalgar with his wife, Nancy, and George Hengstman in 1993. Trafalgar was one of the first microbreweries to open in Ontario and outlasted most of the originals. Arnold attributes this success to planning and watching the current beer market. They prefer to keep most work in house, which is why they prefer to bottle in 650 ml bottles. This allows them to target beer drinkers who are interested in trying something new.

elections seem more exciting. They did this by tying a beer to each party and allowing you to vote by buying a pint of your favourite party. This was the second election they held this beer election and put four parties on tap with Liberal Red Lager, Old Tory Lager, Worker's Brown Ale (NDP) and Debatable Ale (Green). Although they didn't correctly predict the winner, Liberals won with 38% of the vote and the Conservatives took second with 36%, this seems like a lot more fun way to vote than putting an "X" in a box.

I brought home a bottle of the Smoked

Mixology 101

One drink, Two drinks, Red Drink, no more Blue Drink



AMANDA LEDUC
2A MANAGEMENT

It's high time we discuss my favourite drink ever. Thus far, the cold drinks we have discussed have primarily been fruity concoctions, which although good, have the tendency to become repetitive and sickeningly sweet. When this occurs, one usually wants to stop drinking for the night ... and that's bad.

I must admit I'm quite fond of Caesars and other such "bloody" drinks. They tend to be salty rather than sweet as well as a bit spicy so you don't drink them too quickly.

Mixing liquor with tomato juice and a number of spices to create a Bloody Mary was first done in 1920 by a bartender named Fernand Petiot in Paris, France. The Bloody Mary quickly gained popularity and has become a fairly popular drink worldwide.

The ceasar however is largely a Canadian drink. The Caesar was invented in Calgary, Alberta by Walter Chell in 1969.

He invented the drink while working at the Calgary Inn for the opening of their new restaurant. The main difference between a Caesar and Bloody Mary is that clam juice is added to a Caesar with the tomato juice (or Clamato is used alternatively). In the U.S., if you want to order a Caesar, try asking for a "clamdigger" with vodka and you may have more luck.

Making a good Caesar really isn't difficult. A classic Caesar contains 4 main ingredients with varying garnishes. All you need is vodka, Clamato juice, Worcestershire Sauce and Tabasco sauce. If you're not a fan of Clamato, you can simply replace it with tomato juice. Also, if you don't happen to have Tabasco, Frank's Red Hot sauce works well as a substitution.

Once of the best parts about Caesars (other than the taste) is how easy it is to make them look professionally made considering how many of the garnishes can be substituted. The basic things you'll need for garnishing this classic drink are a highball glass, some celery salt, a stalk of celery, a few drops of lemon juice and a few ice cubes (keeping in mind many of these can be substituted for what you happen to have on hand).

Begin by rimming the glass with the lemon juice. You can also use vodka or

even water. Next, cover the lemon juice with celery salt. I recommend using Mott's "Rimmer" or even plain salt if that's easily available. Do this by rotating the glass over the sink while sprinkling the salt over the rim of the glass. If you happen to have bowl and are planning on making a lot of Caesars, dump the salt of your choice into the bowl. Place the rim of the lemon juice rimmed glass into the bowl (upside-down) and rotate the glass.

Now you can add the ingredients. Add 1 - 2 ounces of vodka. Then, add 3-4 shakes of Worcestershire sauce and 2-3 drops of Tabasco. If you're like me and don't handle spiciness well, only add 1 drop of Tabasco for the flavour. Finally, add ice and fill the glass with clamato.

Place a celery stalk slightly taller than the glass into the drink and you're done! Alternatively, you can use a toothpick and skewer a hot pepper and lemon wedge together and mount that on the side of the glass for a different finish. Another interesting garnish consists of skewering olives and hot peppers on a long toothpick and balancing it across the opening of the glass (like a bridge).

I don't really recommend deviating from the basic ingredients too much; however, if you do and come up with something delicious, let me know!

Tip: Presentation is key with a bloody drink. The highball glass seems to be the current standard glassware for this drink; however, you can use just about anything and it will look nice. Try using stemmed glasses such as wine glasses and even short stemmed beer glasses.

Interesting Fact: Canada is about the only place that mixes Clamato juice with alcohol. Mott's originally printed the recipe for a Caesar on the labels of its Clamato juice bottles in the United States. The idea didn't catch on in the US, but certainly did in Canada. You can now buy pre-mixed Mott's Caesars at most bars and the LCBO, but don't bother trying to find them in the US!

Cheers and Happy Mixing!

Bloody Good Drinks

Classic Caesar

1 oz vodka
3-4 shakes Worcestershire
2-3 drops Tabasco
1 dash pepper
Clamato Juice

Classic Bloody Mary

1 oz vodka
3-4 shakes Worcestershire
2-3 drops Tabasco
2-3 drops lemon juice
Tomato Juice

Poor Man's Bloody

4 oz beer
1-2 shakes Worcestershire
1-2 drops Tabasco
8 oz Tomato Juice
1 dash salt and pepper



Dilbert The Engineer's Hero



JON MARTIN
1A CIVIL

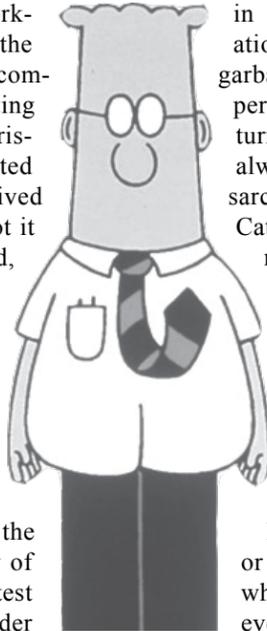
For every engineer, and engineers at heart, there is a hero. A man to look up to, who has to put up with every situation and keep on working. A man with insane coworkers, and an inept boss who doesn't even have a name.

That hero is Dilbert, the man with the crooked tie and the talking dog. Anyone who can appreciate the humour of Scott Adams has a bit of engineer within them, whether they admit it or not. Dilbert and his fellow co-workers have had many adventures over the years. For example, Wally, who is never seen without his mug of coffee, has the ability to avoid doing any work; yet he still gets paid.

Wally once sapped the will to live out of the motivation fairy.

Another of Dilbert's coworkers, Alice- the woman with the triangular hair, is intensely competitive and always competing with her coworkers for pay rises. When Alice was promoted to manager level the devil arrived to take away her soul; she got it back when she was demoted, of course.

The smartest and most dedicated employee is Asok, the intern. Asok puts up with all of the abuse from his coworkers and still keep working. After the company constructed a space ship Asok was chosen to be the test pilot, before the monkey of course. After dying in the test flight Asok was cloned in order



to bring him back.

Whenever Dilbert needs help in solving an impossible situation he can always turn to his garbage man, the most brilliant person in the world. Or he could turn to his dog, Dogbert, who is always ready to respond with a sarcastic comment. Or there is Catbert, the evil head of Human Resources, who excels at making life difficult for all employees and introducing policies to increase his salary.

Anyone who has had to deal with crazy coworkers and bosses owes it to themselves to read the next Dilbert comic in the paper, or online at www.dilbert.com, where comics are viewable from every day of the last year.

Easy as 123

AL GRANT
2B SYSTEMS DESIGN

Here's a puzzle! Find the missing numbers... they are not all so simple!

- 1) 1, 2, 3, 4, 5, 6, ... ____?
- 2) 1, 2, 3, 7, 22, 155, ... ____?
- 3) 1, 2, 3, , , , ... ____?
- 4) 1, 2, 3, 7, 46, 2109, ... ____?
- 5) 1, 2, 3, 5, 16, 231, ... ____?

1) 1, 2, 3, 4, 5, 6, ... ____?
 2) 1, 2, 3, 7, 22, 155, ... ____?
 3) 1, 2, 3, , , , ... ____?
 4) 1, 2, 3, 7, 46, 2109, ... ____?
 5) 1, 2, 3, 5, 16, 231, ... ____?
 Solutions
 1) 1, 2, 3, 4, 5, 6, ... 7
 2) 1, 2, 3, 7, 22, 155, ... 421
 3) 1, 2, 3, 4, 5, 6, ... 7
 4) 1, 2, 3, 7, 46, 2109, ... 50000
 5) 1, 2, 3, 5, 16, 231, ... 421

Holiday Fashion Tips



BRYAN SACHDEVA
4N COMPUTER

Oh the weather outside is frightful, but your attire is so... Oh wait, you don't look good at all. At least not yet. Erica's taking the week off, so I'm going to give you my advice on the dos and don'ts of winter wear and holiday fashion. No matter what your socio-cultural or religious affiliations, the holiday season is an integral part of being in Canada- there's just no avoiding it. Along with jingles and oldies playing in the pharmacy while you buy an extra pack of cough medicine, it also signals a change in what becomes expected attire.

First things first, it's better to be warm than look like an idiot. Dressing in style doesn't mean toughing out the cold. If anything, you'll just look out of place and foolish. So, it's completely expected that you'll be wearing a winter jacket, boots, mitts, a scarf, and head gear. Don't avoid it, just make it look right. The key is to keep things simple, clean, and matching. The added warmers can be thought of as accessories to match your style.

The first big hurdle for you to get over is your winter jacket. I sport my trusty leather engineering jacket, but it's also not the only jacket I own. It's warm, but it takes a bit of work to make it fit with your outfit. Try getting a white ski jacket (now popular with a graphic design), or something in tweed. See H&M for examples. An alternative for jacket will give you many more options when consider-

ing your whole outfit. That's really the point; consider every piece that you'll be putting on when you get dressed.

If you're wearing a black jacket (especially leather), keep your accessories black or dark grey and simple. Fleece is simple, yet warm. Avoid any further patterns or insignias. If you're wearing white, cream, or some bright color (really only red, yellow, or green please), then a pattern is very acceptable, and is even expected. Anything graphic without words! Only wear knitted or wool items with light colors- black is meant for looking simple.

Now, another tricky situation is your company holiday party. Rule of thumb at any work event: DON'T GET DRUNK! Why? Because you'll look like a newbie; someone who doesn't have experience with a party and that just looks sad. And your clothes follow similar guidelines, dress for the party in way that says "I know how to appreciate refined things". In other words, be classy. Simple and traditional always work. After all, the holidays are mostly about tradition. A deep red or dark green shirt, paired with a white tie is very slick. Guys, pair this with a simple black suit boys, and the colors will pop. Ladies, you're going to want to dress in dark colors. If the dress is short, consider dark tights. Keep the jewelry to only the essentials. And remember, wear boots outside, and bring your polished dress shoes (that match your suit) in a separate bag.

And when you're home with the family, feel free to lounge around in sweat pants and a hoodie. As soon as guests arrive, go take a shower, and wear something nice.

Happy Holidays!

Head for the Hills!

Staying Fit and Happy During the Winter



GRIFF FERGUSON
2B GEOLOGICAL

Old Man Winter is back again and he's wreaking havoc on our roads, sinuses and mental well being. Here are a few tips for staying happy during the winter term despite the cold. First, dress warmly. No matter where you are when you are outside, whether on the slopes or on an ice rink, staying warm is key. Far too often people dress poorly for the weather, which can have adverse consequences for their enjoyment and health. So, dress appropriately and always bring another layer of clothes! You never know when you might need them. Secondly, get outside! There are many opportunities for fun during the winter, you just need to find the one that suites you. There are numerous ski hills in southern Ontario (from Orillia to Waterloo) that offer the chance to ski, snowboard, snow blade, or snow tube from January until March. Many of these places offer season passes. In addition to season passes, decent-quality equipment rentals are available, but you must be prepared to pay a little extra on top of a lift pass. For the more competitive winter enthusiasts out there, some ski

hill operations provide instruction lessons on the 'how to' of various downhill sports.

If you aren't interested in downhill sports, try something a little more peaceful such as snowshoeing or cross country skiing. These sports will offer the chance for some exercise and some of that sweet exposure to sunlight most of us lack during these four months. On top of that, you get to take in the beauty of the countryside! Even if the outdoors aren't your thing, you can try your hand at ice skating. Many indoor rinks, including those at CIF, offer public ice skating at scheduled times throughout the week. All of these activities provide you with the opportunity to go out with some friends as well, so you can make it a social event.

A search on Google will tell you about the myriad of places that offer day and night downhill sports. It's that easy! Finally, for those of you who are abroad this term, there are likely many places close to you that offer at least one of these amazing winter activities. Especially those of you working in Alberta or BC in the winter term, take that opportunity to visit some of the amazing ski hills close to you. Perhaps you'll find something that you enjoy.

Have a happy, productive winter term!

Leading A Balanced Lifestyle

How to Survive Engineering Without Your Head Imploding

MARC TAN & TIM BANDURA
2A CIVIL & 2A MECHANICAL

We've been walking around lately, and seeing way too many people stressing out about the little things in life. This is clearly a result of not leading a balanced life. We both think that people do not understand all of the vast intricacies that are part of your engineering life here at Waterloo. We would just like to note that we are not professionals, and that you consider our advice at your risk.

Trying to juggle all of these day-to-day commitments can drive the average student insane. Luckily for you, we are highly experienced in leading a balanced, enjoyable, and stress-free life, and we are willing to share our tips to achieve this Nirvana in engineering.

First things first. School is very important. Sacrificing too much school to achieve bal-

ance is not recommended. Contrary to popular belief, you can have the best 5 years of your life here, as opposed to 7. The key here is to find the perfect balance between work, and maximizing your free time. For most people, the shock of watching your marks drop from high school may give them the impulse to study for an insane amount of time. You must fight this urge. Unless you are bound to a high-mark scholarship or have aspirations for graduate school, a grade of 70 is a perfectly acceptable mark. If you can maintain a 70, and partake in many extracurricular events, then you will have the best time of your life.

You may be wondering what sort of extracurricular events you may want to partake in. Engsoc offers a vast complement of events and activities that you can partake in. They are not only enjoyable to participate in, but they can be even more fun to run! You can always drop

by the Orifice to see what activities are happening and where you can help out. Running your own directorship can be very gratifying. The experience of planning and organization, as well as the excitement of seeing your event run, should not be underestimated.

Outside of this, there are many social events you can partake in. There are many fine establishments you can spend your time at during your undergraduate degree. Consuming tasty beverages at these fine establishments can increase your fun factor while completing your undergraduate degree. This is both fun, and sociable, and should always be done with free time. However, you must watch your expenditures in these endeavors and budget appropriately as soon enough you will realize you will need to choose between food and fun factor increases. Please ensure you choose the wiser option.

Engineering and Uptown Waterloo are not your only options. There are a variety of clubs offered by FEDS and a myriad of programs and activities offered by Campus Recreation. These typically start at the beginning of each term and should be investigated immediately for a fun factor. Personally, playing in intramural dodgeball is a huge fun factor for me. Being able to vent the frustration of a difficult midterm by pulling off insane moves is immensely gratifying.

Regardless of what you choose to mix your school with, special care must be taken to ensure that you do not neglect one aspect. If you need advice on how to balance, you can always find one of us to talk to. We can offer sound suggestions on your situation. You'll see us in the halls, at the bars, in POETS, or in the Orifice. Drop us a line sometime.

HUMOUR AND SATIRE

The Adventures of Dangerman

Adventures in Getting Dumped



Dearest Reader,

To begin with... Break-ups suck.

If you have a heart at all, you'll agree that when a relationship ends there really are no winners or losers; everyone comes out of it in the negative. The sense of overwhelming betrayal that consumes you when someone you believed you could count on above and before anyone else tells you that they never want to see you again or they love someone else. I don't care if you've been shot, stabbed, poisoned, or forced to sit through "The Notebook", there is absolutely nothing more traumatic than being left by someone you love.

Reality shatters. Up is down, left is right, right is wrong...actually everything is

wrong. Right no longer exists. You can't help but question whether any of the emotion or feeling that you shared with the other person ever actually did exist. Was it a game, a trick, or worse, a lie? Then, unable to accept such a possibility you scour through every disagreement, every fight; a spiraling headache of desperate over-analysis, searching for that one moment when things shifted from good to bad and you started to lose them. It's a scary time when you spend four hours staring at the same wrinkled patch of ceiling, finally deciding that if only you'd made a concession and agreed to floss at night instead of using tooth-picks after meals, maybe she'd still love you!

Or on the other side of the coin, when you have to come clean to someone you care about that you honestly don't love them anymore, and watch as each second rolls by and their soul is slowly crushed under the weight of what you've said to them. A note on tactics readers: don't choose break-up

locations that are an hours-long walk away from the other person's house. It'll be the longest hour of your life.

It's been a long time since I've gone anywhere near experiences like these. However, when people you care about and see every day are going through it...just observing from the outside makes you want to run to the bathroom and be sick over your own memories.

"I ought to grieve, but cannot what I ought;

I mourn the lover, not lament the fault;

I view my crime, but kindle at the view;

Repent old pleasures, and solicit new;

Now turn 'd to Heav'n, I weep my past offence,

Now think of thee, and curse my innocence.

Of all affliction taught a lover yet,

'Tis sure the hardest science to forget!"²

However, I will say, that as bad as the endings inevitably are, the durings still make it all worthwhile. I can remember a

time when I was so happy...so incredibly happy I felt like I would explode. I'd never felt that way before; not after a good mark, not after a letter of acceptance, not after any single accomplishment of my entire life. It's how I felt right before the first time I told someone I loved them and really meant it. The fact that it made the other person so angry that they shoved me as hard as they could right out of the bed, which was a good meter off the ground is sort of a moot point.

I'd do anything to feel that way again, I'd brave shootings, stabbings, several viewings of "The Notebook", you name it.

So until next time, don't give up.

Sincerely,

Dangerman

Eric.Dangerman@gmail.com

¹Note to readers: avoid dating dental hygienists... they're cute, but high-maintenance

²"Eloisa to Abelard" Alexander Pope 1717

Christmas is A-Coming

Tips for Staying Toasty



Good Morning/Afternoon/Evening my Sexy readers!

With the term finally drawing to a close, and exams right around the corner for most of you, this is the last time we'll get to have a sexy party before you're back on campus, whenever that may be. So let me just take the first paragraph to wish you a happy holidays and safe trips home/abroad, wherever and however you choose to spend your time off from these hallowed halls.

Winter is my favourite season. I absolutely love it. The frigid temperatures, the beautiful snowfalls, the treacherous ice that makes life interesting, and the silence at night that the snow brings as it softly drifts down in the moonlight. With the advent of the first snowfall, the Chad has been a-wondering many things (like where my pants are?). Being from up north myself, I've not ever had the issue of having to become accustomed to the chilly transition to winter (if you can even call it winter when it only gets to -10 C). But, I reasoned, it must be difficult for a lot of people to get used to, especially if you're from warmer climates, and more especially if

you're from somewhere that doesn't get this cold. Fear not! Or maybe fear a little, as you should when I give out advice, the Chad is going to share with you some tips and tricks for staying warm, navigating the frozen tundra, and generally surviving the only season that matters.

Stay Indoors

This one might seem quite obvious for the most part, but there's more to it than you'd think. First off, if you're going to be on campus, or anywhere with multiple structures, there is usually a way to go in between without going outside. There is a way to get from the MC building to any of the Engineering buildings and back without setting foot outside once. It might take a little longer, but it's worth it to stay warm. If you're waiting for the bus, try to stay in a nearby building until the last minute and then run (watching for ice) out as the bus draws close.

Get Good Clothing

A sexy winter jacket can make all the difference in a cold climate. If you get a really big one, there's sometimes room for a chilly friend too! A good hat (with sexy ear-flaps) and gloves or mittens are also a good idea if you're going to be outside for a while. Be sure to check for a temperature rating and moisture release system when you're picking up winter accessories. Also, there is much to be said for a super-hot pair of thermal underwear. Not only does it accentuate your curves

and muscles, but it also keeps you warm! You can pick up a decent pair for pretty cheap and slip them on underneath your clothes. But be careful about getting too hot when you're inside.

Get Good Footwear

Sandals, mesh runners, and 'pretty' shoes just don't do it when it comes to the ugly side of winter. If you're serious about going outside during the next 9 months, the most important piece of clothing you wear will be on your feet. Winter boots are designed to handle the slippery ice, cold temperatures and slushy puddles you're sure to find lying in wait for you on the frosty floor. Get a waterproofed pair (or waterproof your current pair with a spray) and double check the treads to see if there will be enough grip to stop you from sliding about. Ladies, suede is not a good choice.

Eat Warm Foods

Soups, pasta's, oranges, fruit bats, and hot breakfast cereals (like oatmeal, or leftover mashed potatoes) are good foods that will keep you warm from the inside out when you venture into the arctic winds. Hot chocolate and coffee or tea will quickly bring you back to room temperature once you return. Be careful not to burn yourself though!

A few of Chad's personal secrets.

Grow a lot of hair. Everywhere... not just on your face. You can save a lot of money on jackets, mittens, thermal underwear and

other things if you can grow hair everywhere. A head full of long hair can double as a hat and a beard makes a great scarf if it's long enough.

Put your clothes in the dryer. The Chad throws his pants, shirts, socks and underwear in the dryer for 5 minutes on a hot cycle just before departing to give that little extra warmth while adjusting to the outdoors. There's no feeling like toasty undies when it's below zero.

There's safety in numbers. Finding a beautiful lady friend or manly hunk to hold onto when you're outside is a good way to share the body heat and stay warm. Hugs work great too. The Chad always finds a lovely lass with a little chill to warm up with in the winter air (and maybe afterwards if you're lucky?).

So there you have it, almost all of my little secrets for staying warm in the winter. Use them wisely, and have an adventure or two while you look for the fathomed routes between locations on campus. Until the new year my sexy readership, have a happy holiday season.

Stay Sexy!

Want to have a question answered by Chad in the next IW issue? Email questions4chad@gmail.com.

Holiday Tips while Studying for Finals



It's an unfortunate truth of Fall terms that unless you're really enthusiastic and do all your Christmas shopping in November, by the time exams are finished, you'll have less than a week to get ready for Christmas! (Oh no, talk about tight deadlines!) So, here are some quick things you can do to help you get in the spirit while studying for finals.

Crafty Gifts

A lot of crafty things don't actually require too many materials and can be fairly quick and easy. Origami is especially great! It takes a bit of practice and attention to detail, but pick up a block of square coloured paper at any craft or art store to get started (gift wrap

also works very well, and you'll probably be buying some anyway!). The internet has insane origami designs, but something cute and simple in a nice paper is great for adding to cards or gift tags. You can find modular origami models that consist of fairly simple pieces that when constructed have a great wow factor.

Baking!

I love Christmas baking and honestly who doesn't?! There are thousands of recipes available, many of which are very simple. Basics like butter, flour, sugar, eggs, chocolate and spices can take you a long way. Just read a recipe or two before heading out for your regular grocery trip, so you can have ingredients on hand when you feel so inclined. Mixing and baking shouldn't take more than an hour and a half, so you can get back to studying in no time with delicious munchies! Baked goods also make great gifts for friends or extended

family, because it shows you took the time to think of them and had the strength of will to resist eating everything yourself!

Decorations

If you live in residence or any of the majority of student housing type buildings, you understand that bare concrete walls don't go for much in the way of festivities. Next time you go home, ask to take some of your parents' decorations back with you. If they're anything like my mum and have boxes and boxes of Christmas decorations, a few pieces won't be missed. A simple light chain can add a lot of fun, if you can manage to get it to stick to the wall properly! (see my article in the last issue about duct tape!) Paper snowflakes are super simple to make and look festive when stuck on windows or hanging from the ceiling. Besides, they bring you back to kindergarten, or at least the days before engineering sucked away your soul... Dig out your Santa mug

from when you were 6 and drink hot chocolate (spiked or not...) - I've done so already, and it's made my November that much better!

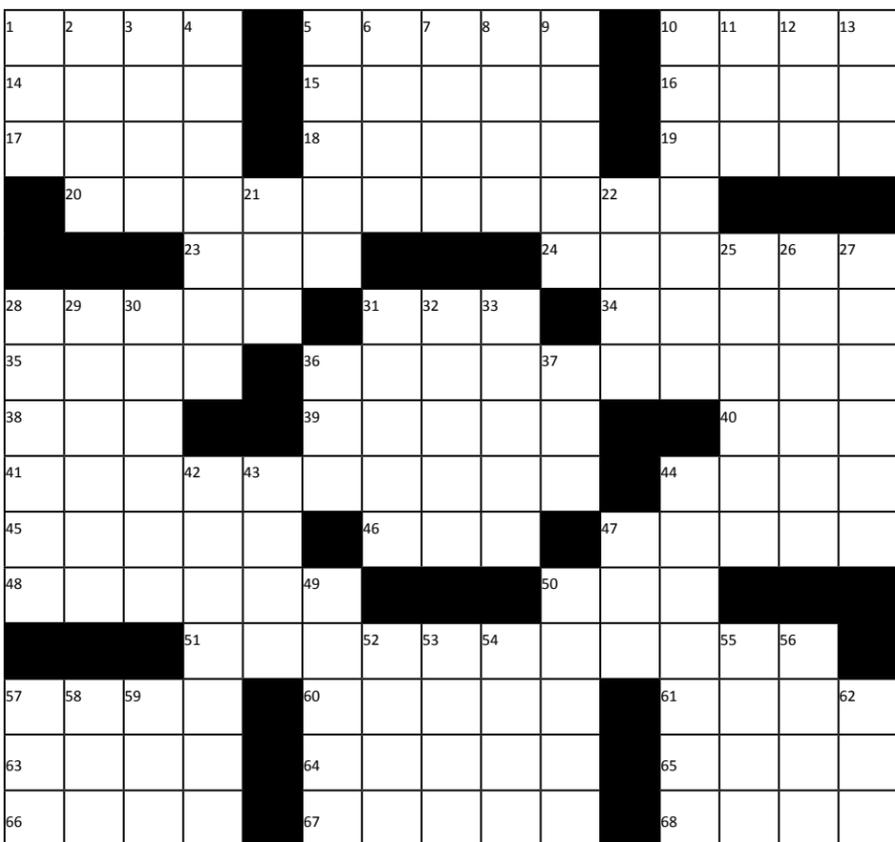
Uptown Waterloo

Stuck for gift ideas? Uptown Waterloo has a variety of stores that have great Christmas gifts, from stag to fair trade and everything in between. It's closer to campus than either of the malls so it's convenient. Waterloo Park also hosts a Festival of Lights from November 29th to January 4th, which makes for a fun festive break if you need to get out of the study room and stretch your legs for an hour or so in the evening.

So just because you're tight on time doesn't mean you can't be creative and get into the spirit of the holiday season. In the end, remember that it's about spending time with those you love, and don't get too caught up in the material side of things. Happy studying!

The Iron Crossword

MATTHEW CASSWELL
2A CIVIL



The Iron Sudoku

MATTHEW CASSWELL
2A CIVIL

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

Crossword Clues

Across

- ___ towers were large, anti-aircraft houses used by the German Luftwaffe during WWII
- A type of flowering lily
- A small, external parasite sometimes found on dogs
- Another word for an assistant to a senior official
- Double curves with the shape of an elongated S, commonly a type of historic middle-eastern arch
- District in Lower Saxony, Germany, on the border with Belgium
- Form of electromagnetic radiation, used to see bones in one's body
- To wander about at random
- The noise a pig makes
- An agreement between two or more parties to do something
- Green, leafy plant that commonly grows up the walls of old buildings
- An even chance or choice(2 wds)
- In Star Trek, a humanoid that has been assimilated by Borgs
- Greenwich Mean Time (abbr)
- The increase of assets (pl.)
- Past-tense version of "ring"
- Adverb for a word described as capable of causing fear
- Uniform Resource Locator (abbr)
- French word for "sending"
- Abbr. for the official name of Taiwan
- Element "M"
- A structure that spans a space while supporting weight
- Plural form of the medical term used for the Elbow Bone, Ulna
- Time zone that we are in right now (abbr)
- A long, slithering reptile
- 2007 Hong Kong blockbuster movie (2 wds)
- Go outside, look up. What do you see?
- General term referring to the inflammation of lung tissue
- CompSci abbr for "Garbage In, Garbage Out"
- Class of racing sailboats
- Nestea is a form of ___ tea
- Simon Cowell's brain-child TV show (international term for the show)
- Describes tides
- Short-form for monophonic
- Another word for intersection, commonly used in Electrical Engineering
- Not moving
- This term ___ almost as fast as it starts.

Down

- Common term for a facsimile
- Italian currency prior to the Euro
- Hebrew name for the sixth month of the year
- What your keys hook onto
- Describes someone trying to be cool, but ultimately very un-cool or embarrassing
- Full of intense interest or excitement
- Canadian actress ___ Campbell, who played Sidney Prescott in Scream 3 (2000)
- Fast-growing tree from the Indian subcontinent
- Everything that can be converted into cash
- The heavy-metal band ___ and Jetsam
- Hawaiian garland
- Enterprise Europe Network (abbr)
- A large boat
- Short-form for Avenue
- The results can be a GO or a ___ (2 wds)
- GMC Truck Model
- What you do to a locked door to open it (don't think too hard)
- Type of a 1990's comeback after you tricked someone.
- Another term to obtain something, ie. business
- In a survey, how often you do something. Always, Almost Always, Sometimes, ... etc.
- Another website term for being "live"
- Vague categories with no fixed boundaries, especially for music and movies
- Road in Mississauga, parallel to Hurontario St.
- Type of fish
- A cost charged for a service provided
- In gaming, short-form for simulation (think games made by Maxis)
- Baby frog
- Element used in lit-up signs at stores and restaurants
- All the time
- Snow sport
- Old English term for tales of an adventure
- Another name for Descartes' Law, or the Law of Refraction - ___'s Law
- Don't forget these in your final answer! (don't plural it)
- Type of music file, common for karaoke songs
- Australia's national gemstone
- Another name for the shortcut pictures on your desktop
- Opposite of receive
- Liquor made of raw cane redistilling white grain spirit and raw cane sugar
- The two most important words at a wedding
- Supreme being
- ___ and don'ts

THE IRON INQUISITION

Stuart Pearson, 2A Civil

"How has the current economic crisis affected your job search?"



Jonathan Ong & Michael Zhan
2A Management
"We've already got our co-op jobs"



Adam Melnik
4A Geological
"Don't be a fool, stay in school"



Chris Szybalski
2A Mechanical
"I'm stuck in Sudbury for the winter"



Marissa Bale
2T Chemical
"Co-op sent me an email asking me to try and keep my current job next term"



Peter Vollick
2B Mechanical
"Lots of the jobs I applied for got cancelled"