

# the IRON WARRIOR

THE NEWSPAPER OF THE UNIVERSITY OF WATERLOO ENGINEERING SOCIETY

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## Who Will Be Next Term's Scunt Gods?

Iris Wong  
Second Year

After 24 hours of events, acquisitions, trivia, and bribes, next term's Scunt gods will be from the Faculty of Math. "MATH???" you ask, "But this is ENGscunt!" Yes, that's right, the math team won. It's not a surprise that they won, considering that their team was bigger than some teams combined. In the past Mathies were not allowed to win because the winners were required to organize Scunt for the next term; and a lot of administrative issues would arise. Since then, the Dean of Engineering has been able to work out an arrangement with the Faculty of Mathematics to allow Scunt to be run by math students.

This term's EngScunt was organized by Software Engineers (do I sense a conspiracy?), started at 12 noon on October 3, and ended 12 noon the next day. The theme was television, hence the event name "ScunTV". Some of the exciting events included Amazing Race Around Campus, Survivor, Scunt Idol, Name that Tune, the Price is Right, and Iron Chef. Everyone had a lot of fun and it will be exciting to see what will happen for next term's EngScunt. Engineering students should definitely regain the title back, so be sure to leave a weekend open for the winter 2004 EngScunt.



Scunters enjoying one of the many strange, strange activities run during the course of the event. Reality TV anyone?

## CECS Homebrew with a Twist of Cynicism

Cindy Bao

2B Electrical



Hosted by UW Business and Investment Club, Prof. Smith's public lecture attracted students ranging from frosh to graduating class. In an hour, he took the age-old job-seekers' recipe to an extreme. For those who are curious, the instructions are as follow:

In the good old days, a degree was all you needed to land yourself a job. Then, as education degraded to the minimal requirements, there was the co-op experience to set you apart from your contemporaries. It worked for a while, but now those greedy employers want even more. In today's increasingly competitive workplace. "average is a curse". You have to constantly go above and beyond the call of duty just to stay where you are, not to mention getting ahead. Above, according to the economic professor, Larry Smith, are the reasons you need to impress employers by pushing their hot buttons.

Be prepared: Be ready to impress anyone near your way. As you never know when the opportunities will present themselves, the ability of striking up a spontaneous conversion is definitely an asset, and carrying a stack of your resumes at all time a must. However, if you are like me, simply get around by planning to meet potential employers during the short time interval between photocopying resumes at the Orifice and dropping them off at the co-op building on the day a posting is due.

*Continued on page 10. See There's Something Interesting Going On*

## Why Push the Hot Buttons?

Hui Lam Yau

4A Mechanical



I just went to the Larry Smith presentation on "Impressing Employers: How to find their hot buttons." I'm not writing a review of it though, look for Cindy Bao's article "CECS Homebrew with a Twist of Cynicism" for that. However I will say that professor Smith put on a great presentation; it was the first one I ever been to. He expressed his ideas very well; everything he said made a lot of sense. I was quite depressed by all of it.

Here's what's depressing about it:

1. He said that the job market is a lot more competitive than it was 50 years ago, and it's only going to get more competitive.

2. He also said that us as students, either co-op or graduating, will have to work extra hard to get the good jobs, to the point that you have to be "malicious" about it. You have to suck up, put up acts, catch people off guard, catch people saying the wrong things, and in general be on guard 24/7 to weasel your way into a good job.

3. He implied that if we're not doing that, we're wasting our lives, not living up to our "full potential".

So the first part, things are getting harder? What are we doing to ourselves? Why are things getting harder? Isn't the goal to try to make things easier? What's wrong with everybody? Who decided to make things harder and harder? Why are the robots taking the work from us instead doing the work for us? Where are the futuristic soci-

*Continued on page 10. See We Can Do a lot Less and Still Ensure our Survival*

*Success is not the key to happiness. Happiness is the key to success. If you love what you are doing, you will be successful. - Albert Schweitzer*

## Letter from the Editor

Joseph Fung

3N Computer

Editor-in-Chief



In the preparation of this issue, I once again found myself debating the subject of this article. Then, my activities over the past weekend helped crystalize my subject. During the weekend I had the opportunity to in the CoFIQ (Coalition des Facultés d'Ingénierie du Québec) presidents meeting. At this conference I made a short, 30-minute presentation in French, which brings me to my point. People in North American do not have enough appreciation for the ability to speak multiple languages.

Almost all of the conference was presented in French, but the delegates and executives were very accommodating about helping me understand anything I found confusing. Almost every last person in attendance, with the exception of maybe one or two including myself, were perfectly bilingual. The fact that I was amazed at this is, I believe, a sad commentary on our lives here in Ontario.

For the most part, the people in Ontario are bilingual for one of several specific reasons:

1. They are immigrants or visitors to Canada and as such speak their native tongue and English. They learned this second language in order to live in our society.
2. They are the children of immigrants, and as such speak English and the language of their parents.
3. They are people who appreciate the fact that Canada has two official languages and as such made the effort to speak French and English.

Although there are exceptions to every rule, for the most part, people in Ontario can be placed into one of the above mentioned categories, or they can be labeled as uni-lingual. To me, this is a depressing reality for a Country that bases the greater part of its PR on the fact that it's diverse.

When compared to European nations, where the ability to speak several languages is a norm, our insistence on wearing blinders and believing English is

enough is an issue.. The problem I see lies not in our education system, nor in our personal desire for self-improvement. The problem lies in the underlying philosophies of our society, which means to change it would be no easy thing.

But, one may argue, why is this a problem? Thus far, I have been working under the assumption that everyone agrees that speaking multiple languages is of benefit - the issue is that this is not the case. Many people believe it is sufficient to speak only one language, or perhaps only two languages. I am however, putting forward that this is not the case and that we should each strive to be able to communicate in three, four or five languages - or better yet, in as many languages as possible.

With increased immigration, with the development of international exchanges, and with the development of a "global community" view on communications, the need for multilingualism is not only apparent, but growing rapidly. Sadly though, Canada is lagging in this field.

In 1997 a whitepaper was released by the European Commission; "Teaching and Learning - Towards the Learning Society" proposed, among its primary initiatives, the mastery of three European languages. In June of 1995 the Cannes European Council emphasized the importance of respecting linguistic diversity. In his message to the members of the Higher Council of the French Language on October 24, 1995, Alain Juppe, then Prime Minister of France, stated that "the promotion of multilingualism, along with the respect of the cultural exception, is a part of our project for the 21st century."

Not only have others seen the need for us to be able to communicate in several different languages, but they have seen it years ago, while Canada plods along it's uni-lingual track.

On an individual basis, the process of learning more than one language aids in the development of a child's brain - being restricted to a single language restricts a child thoughts to the limitations of that mother tongue. To be able to easily express themselves in multiple languages means they freed from the linguistic restrictions of their mothertongue which would be present subconsciously. Furthermore it helps the child realize that language is only a single form of communication and it will engender that child with a greater respect and appreciation for

people from other cultures.

From a social standpoint, multilingualism promotes communication between ethnic and and linguistic communities. No one can argue that we always gain from interactions with people with different perspectives - multilingualism makes it easier for us to realize this benefit.

And finally, professionally, in the work place the ability to effectively communicate is becoming a more and more valuable skill and multilingualism will give an employee a significant edge over others.

So clearly there are benefits, but how can we try to effect a change? To be honest, the only way to do so is to do it from a grass-roots level. Individuals need to take it upon themselves to push themselves and their children to try and develop their language skills - only in this way will our society as a whole really appreciate the value of multilingualism.

## Questions? Comments?

We welcome letters and feedback from all our readers. Please email us at:

[iwarrior@engmail.uwaterloo.ca](mailto:iwarrior@engmail.uwaterloo.ca)

## Want to be a Famous Playwright?

Every term the Engineering Society puts on a play - a play performed by Engineering students. Now it's possible to become involved in a way never before available. The drama staff for the upcoming term are looking for you to help them write a play. They are looking for a one-act (30-45 minutes long) play that can be produced with a low budget (few props and simple costumes) and with both male and female rolls. The due date for submissions is November 15th, and submissions can be sent to Ryan Consell at [raconsel@engmail.uwaterloo.ca](mailto:raconsel@engmail.uwaterloo.ca). The selected play will be billed with the playwright's name and the winner will receive a free pair of tickets to a showing of their choice in the Winter term.

the IRON WARRIOR

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# the iron warrior magazine

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## The Scunt Before mid-October

Bill Hates

Special to the Iron Warrior

The weekend of October 4th hosted - aside from the Pub Crawl, Grad Auction, Nautical Competition, Semi-Formal and uncountable other events - the fall SCUNT, organized by the Software 2As and bestowed with the theme of television. Activities based on shows like American Gladiators, Junkyard Wars, Name that Tune, and Iron Chef tested the competitors' ingenuity, knowledge and physical prowess while trivia questions and hunt acquisitions were inspired from televisory sources like Seinfeld, the Simpsons, the X-Men, The Matrix, and Star Trek. All events appeared on a regularly updated schedule on the big screen in POETS, displayed a la Rogers Channel 13.

While much of the SCUNT was programming suitable for all viewers (or so my sources tell me) it still included the

**"...shouldn't excuse them from playing the game fairly like the legitimate competitors"**

inevitable controversy. Late Friday night, a group of young engineers managed to mysteriously extract one of the most valuable game pieces from the locked Math Society office. While this act is condemnable for being against both the SCUNT rules and the Criminal Code of Canada, one is forced to ask: why were the math team - who were generously granted the privilege of competing in this engineering event - locking up one of the most valuable pieces in the game in their society office? It's like refusing to lose a game of chess by putting your king in your pocket! (A second question: Why is the MathSoc office security so poor? I hope their firewalls are not similarly porous).

Needless to say, the mathematicians ranked 1st overall: a sad result for engineering made even sadder by the rumour that the SCUNT organizers were forced to choose the math team over the 2nd place Systems team by an executive order from our very own Engineering Society. Unfortunately, the cryptic scoring of the event prohibits a closer inspection of the standings, however one fact deserves mention: no matter how inventive the math team were, bringing food to the SCUNT gods every hour shouldn't excuse them from playing the game fairly like the legitimate competitors.

Addendum: The Softies puts tons of thought and effort into those events. To all the participants who enjoyed that night for a dollar or so, I urge you to help them cover their substantial costs by buying a reasonably priced SCUN-TV shirt, otherwise your next SCUNT might include events like "pan-handling" and "applying for welfare".

## The Art of Living: The Bare Necessities

Sabrina Mu  
2A Systems

As the school term progresses, it is curious to see how one's living conditions degenerates as workload increases and stress mounts. By the time mid-term arrives, a lot of things "have to go" to make way for impossible schedules. No more network games, MSN messaging, weekend BBQs, Bomber nights etc. But in my opinion, there are three essential things that cannot be neglected in order to have a good life - sleep, food and a great sense of style.

People often say "I can sleep when I am dead." That may be true, but I believe that you live longer if you sleep regularly and adequately. After all, you are never awake if you are never asleep. Personally, I think at least 6 hours of sleep is required for a person to function effectively and efficiently, though 7 or 8 are ideal. It really all comes down to sustainability. Sure, sometimes you can pull an all-nighter for an exam or a major project but usually your brain would take a vacation on the day after. Therefore, is it really worth it to sacrifice sleep for anything? From personal experience, all your thinking process and your body movement suffer a significant slowdown after one night without sleep. Therefore, you would be much better off to sleep the night before the exam than try to cram in the material that you would not necessarily remember the next day. Adequate sleep also enhances your memory. While you are sleeping, the concepts that you've learned gets absorbed into your long term memory by establishing associations among themselves without your conscious effort. Another thing I've noticed is the fact that sleep deprivation is cumulative. Therefore, if you didn't sleep for one night, you carry that sleep debt with you until you somehow make it up.

Let's assume that you've realized the importance of sleep, how do you actually find time to sleep 6 hours a day? It takes a lot of self discipline to actually go to sleep after studying. TV, downloaded movies, and alas, friends/housemates are all potential threats to the quantity and quality of your sleep. Therefore, in order to have your blissful slumber, you need to impose a curfew for yourself. Usually, it's better if you and your housemates all agree to a "quiet time" after midnight. This way, everyone's sleeping schedule is reasonably accommodated. A word on the alarm clock: it's evil, especially it's snooze button. It is very foolish to have unrealistic expectations for the time that you would be able to wake up. If you went to sleep around 2:00 am, please don't think you can just get up at 7:00 without a struggle. When you do, the snooze button is used multiple times before you actually drag yourself from bed. Don't do that! It's much wiser to just set your alarm to 8:30 or 9:00, and get up at first ring, and skip the "half sleep" stage between the first alarm call and the time that you actually wake up.

### Do we eat to live or live to eat?

Eating is definitely one of the greatest pleasures in one's life, especially when everything else seems to be extremely deprived. I personally don't believe in cooking because it usually takes up a lot of time and would not save you that much money. Grocery store pre-prepared food

is usually a lot cheaper than the equivalents you can buy in restaurants and eateries. It's important to have meals regularly at a routine time everyday. The fixed eating schedule really helps the digestive process, and would prevent you from over-eating because you would never feel starved. A balanced nutritious diet is recommended to everyone. This does not imply calorie counting or strict dieting. Just make sure that you enjoy at least 3 servings of vegetables, and 3 servings of fruit everyday (this is already half of what is recommended by the ministry of health). That slice of lettuce on your cheese-burger is not enough fibre to guarantee you successful bowel movements. A friendly and sociable meal setting is important for mood adjustment and stress relief. Since you have to eat anyways, you might as well take that opportunity to socialize with friends or go to a nice little restaurant or café to relax instead of having dinner in front of your computer screen by your desk.

### Look great, feel great. It's true!

When you are dressed in bummy clothes or in PJs all day, it is difficult to NOT feel depressed. A great outfit can totally lift up your spirit. By that I don't mean you have to be dressed in high fashion every single day. In fact, practicality is extremely important. I've paid the price of blood to learn that limping in sexy pumps is not sexy at all. A general sense of style can be easily achieved by colour co-ordination, and blending that with your personal style. Furthermore, the artful decoration of fashion accessories, such as sunglasses, scarves, and jewellery, can add eye-catching highlights to otherwise ordinary ensembles. In short, the amount of time and energy that you spend in picking clothes from your closet (instead of from the floor) is worthwhile! Below are 10 basic fashion tips:

- Never wear white or light coloured socks with black dress shoes or any type of sandals.

- Wrinkled clothes look bad! Just hang up your t shirts or fold them nicely immediately after drying, don't let them sit in the laundry basket over night.

- For males: please wear undershirts; for females: please go easy on the layering!

- Tighter clothes do not always make people look slimmer or better. In fact, clothes should be used to enhance your body type. The theory is to "show off" the best parts, and "hide" the less than perfect body parts. The rule of thumb is that there has to be a certain balance between the top and the bottom. For example, if you are wearing baggy pants, then a more tailored top would suit, whereas if you are wearing figure fitting boot-cut jeans, then a fluffy sweater or a nice cashmere wrap would definitely work well.

- Indulge in nice scents. Appropriate usage of perfume/cologne can definitely enhance a person's overall look; it makes the appearance a multi-sensual experience.

- Moisturizer goes a long way. Piling on concealer is not the way to go, it only block the pores and make the skin worse off in the long run.

- Tapered pants are not for our age group.

- Yellow gold jewellery are not easy to wear. They can either be fashion statements or blunders, so beware.

- Be open about the colours that you wear. It's boring to always just stick to the basic black, white, blue and grey. Wear crazy colours such as bright orange, china pink and even fluorescent green (even if you are a guy).

- Don't be a trend follower, be a trend setter! Be creative! Sometimes, a nice combination of a few old pieces can achieve a whole new look if you put some thoughts into it.

## The President's New Pad



Above: Josh Levitz's housemates showing their glee at a job well-done.

Right: Grant Holohan and Liz Tobin (Grant's Laurier girlfriend) stenciling hearts as a crowning.

While EngSoc President, Josh Levitz, was away recuperating from surgery, his loving housemates decided to express their compassion by making his crib more warm and welcoming. Pink paint, frilled curtains, doilies, pot-pourri and a pink vanity mirror will help Josh feel more comfortable with his sensitive side.



## Columns

## New Beginning for Hawksley Workman

### Album Review: Hawksley Workman's "lover/fighter"

Michael Simoes  
1A Chemical

"Lover/Fighter", Hawksley Workman's fifth album is an excellent follow up to their previous albums. The band itself was not very well known until it came out with their second album, "(last night we were the) The Delicious Wolves", which contained the smash hit, "Striptease". After making other albums that did not receive as good publicity, the album "Lover/Fighter" is new beginning for the band.

The album, in general, was very well produced, and all the songs connect very well with smooth transitions from song to song. The main theme in most of the songs is the problems of life, prayer to God, and escape and solving the problems through alcohol - mainly whisky.

I thoroughly enjoyed listening to the album the first time because it was the first CD I have bought since Our Lady Peace's release of "Gravity". Well, it lived up to the standards of their first released single off the album, "Anger as Beauty", which is the fourth song on the album. If

you enjoyed listening to this song, the sound they use in it, which is quite unique for this day and age, is very refreshing.

If you are the type of person who does not like swearing and cursing in their music, and like pure lyrics, then DO NOT buy this album. The album cover gave a Parental Advisory: Explicit Content warning, I did not take to heart that warning,

*"...they are very open to the free distribution of their songs."*

but I should have, when the opening lyrics to the opening song "We Still Need a Song" include words not fit for printing in a newspaper.

Also, each song has a different style to it. Some may be very alternative, with a heavy emphasis

on the electric guitar, others are mellow, and focus on the acoustic guitar, while some have a bit of rhythm and blues feel to them. Overall, the mixture of the style in music is very pleasing to the ear, although the lyrics might not show it.

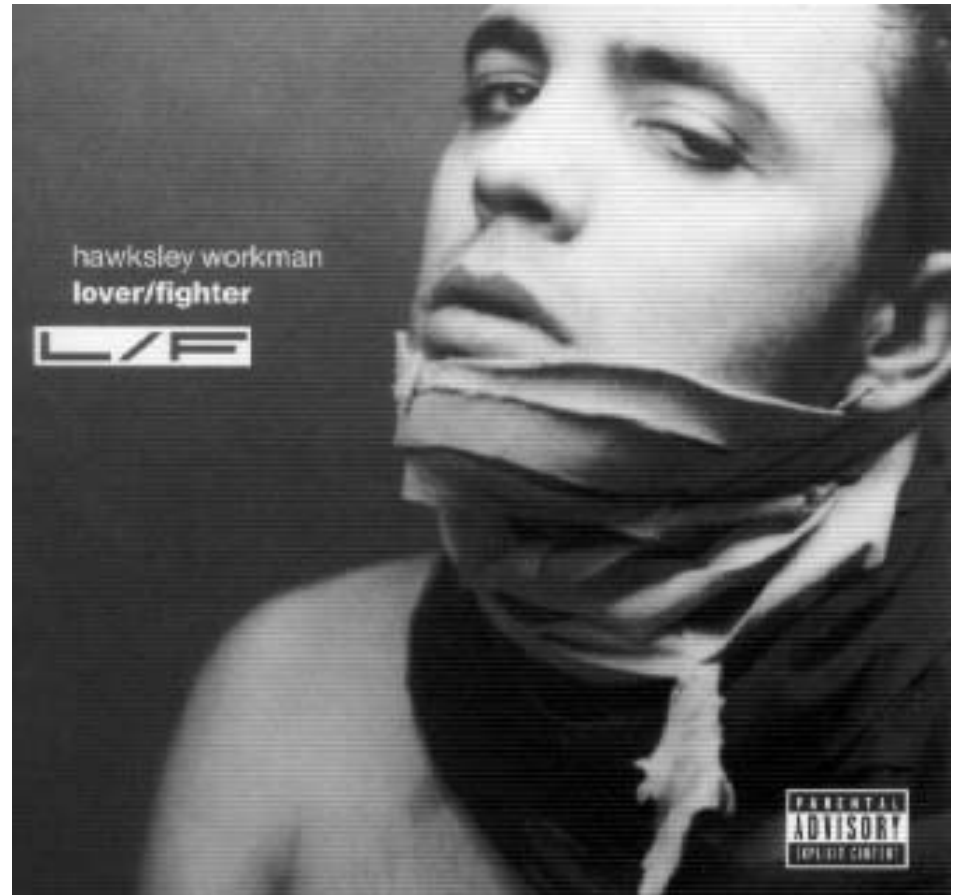
For a band that is not public about their music, they are very open to the free distribution of their songs. When I bought the album, I opened it up, and find a little mini CD, which says, "share new music from hawksley workman by passing this on to a friend so that they can experience some of the songs from lover/fighter",

which I found to be very smart, especially with the downloading of music being cracked down upon by the record companies.

In addition to the nine songs found on the album, they included two bonus tracks.

These tracks are the highlight of the album. They are very well done, and sound excellent.

If you would like to learn more about the album, visit their website, [www.hawksleyworkman.com](http://www.hawksleyworkman.com).



## Survive and Prosper

### Tips on Academic Success

Christos Sarakinos  
4N Electrical

With midterms right around the corner, I thought I'd share with the first year students some thoughts about academic success. It is said that experience cannot be given but that it must be painfully obtained. I choose to disregard that saying, in the hopes that others might learn from my mistakes and hence save themselves the pain of making them. Without further ado, behold five tips for academic success in post-secondary land:

1. Eat, sleep, and be physically active

As much as recently-moved-out-for-the-first-time wing-spreading students might like to deny it, mother does know best. When she told you to eat well and make sure you got enough sleep, she was right.

A healthy diet is an important part of general wellness. Over and above that, thinking burns calories. Malnutrition is hardly a way to secure yourself academic achievement.

Sleeping is also vitally important. To borrow a technological expression, it is during the eighth hour of sleep that the brain is defragmented. Without this defragmentation, it is much more difficult to access the stored information. As an added bonus, being well-rested will enhance absorption during lectures and tutorials. Sleeping helps you learn more easily and increase your ability to recall what you have already learned.

Finally, the ancient Greeks had it right

when they said "a healthy mind in a healthy body." Physical activity is an important part of being healthy.

2. Do NOT underestimate the importance of non-technical knowledge

A common misconception is that "if it doesn't involve calculus, physics or chemistry, then it's not important." This mistake can be a costly one.

First and foremost, learn how your brain works. This knowledge will allow you to trick your brain into doing what you want it to do. In more technical terms, it will enhance your efficiency. Take the study skills workshop, and actually use Google for something productive (for a change).

Also, learn the rules of this great institution. There are far too many instances of the administration citing rules to deny student requests and far too few instances of students using the rules to fight for their rights. Some notable university policies are Policy 19, Policy 70, and Policy 71. Of equal if not greater importance are the faculty's rules for examinations and promotions. Finally, familiarize yourself with your departmental guidelines. The above-described plethora of useful information is available on the UW website.

3. Stop worrying and start learning

You are not Vulcan and as such, you are

not devoid of emotion. For Heaven's sake, though, try not to stress out. Stress can be a good thing, but too much can be most detrimental. If you are feeling overly stressed, then do something about it. Engineering Counselling and Counselling Services might be able to offer you coping strategies. (Incidentally, physical activity is a great way to relieve tension.)

Also, don't sweat the small stuff. If you lost a mark on an assignment, realise that this is worth [say] 0.2 % of your final grade, and there is no point in crying over it. Instead, understand what you did wrong and learn how to do it right, thus making sure that you do not lose marks again on something that weighs more heavily on your final grade.

4. Don't sweat the big stuff (...learn from it)

Midterm results will come as a shock to a fair number of students. Use midterms as an indication of the effectiveness of your study techniques. If rudely awakened by midterms, analyse your behaviours. Ask more successful students about their behaviours. Root out ineffectual and counter-productive habits and continually refine your approach.

Above all else, remember this: the game isn't over until you decide to throw in the towel. Poor midterm performance is only a guarantee of poor final exam performance if appropriate steps are not taken. Take appropriate steps!

5. Obtain the highest possible return on your investment

As a student, you have two objectives: knowledge and grades. You invest time toward these objectives. Often, it seems that students invest their time counter-productively. While this might seem obvious, it is anything but. Allow me to demonstrate by asking a seemingly simple question:

Q: If it is midnight and you have only completed 60% of an assignment that is due tomorrow, do you:

- stay up until 3:00 AM to finish it
- go to sleep because you need rest

A: You cannot answer the question because not enough information has been provided. In this situation, you have to balance opposing interests, namely the amount of knowledge and understanding that will be obtained by completing the last 40% versus the amount of knowledge and understanding you will lose during tomorrow's lectures if you are not fully alert. (Also note that going to bed, completing the assignment tomorrow night and accepting a 10% late penalty might very well be a happy medium.)

Perform a crude cost-benefit analysis of each situation, and take the course of action that will most benefit you.

These tips are not based in obscure theory, but rather they are borne of four years' experience. Keep them in mind, revise them as is dictated by your own judgment, and share your wisdom with first year students when your time here is drawing to a close.

## A New Kind of Epidemic

### Iron Warrior Health Series: Part 1 of 3

Christine McCullough  
2N Chemical

I was doing homework the other day while one of my friends sniffed and sneezed away across from me. Allergy season, and not a Claritin in sight. Not only was he uncomfortable, it was gross for me to listen to. And I felt free to tell him so. I offered my best advice on how to cope, but frankly nothing short of repaving all of Waterloo would make him feel better. That same day someone mentioned that they knew someone who was on "stress leave" from school. That was the end of the conversation. No details given, no advice offered. It seems we feel free to speak with anyone around about our allergies, headaches, knee problems and strange rashes, but when it comes to our mental health, we always speak in whispers.

The truth is mental illness is an all too common disease for many people. If you can see five people right now, chance are one of them is suffering from a diagnosable mental disorder. Think about that, 20% of your friends, the people in your class, the people you live with. How much do you know about mental illness? And how much are you willing to talk about? I want to briefly highlight a few diseases and ways they are treated. Basically, I want you to start to think about mental illness in a new light and hopefully with some facts you will.

Mental disorders fall into many different categories: childhood disorders, cognitive disorders, psychotic disorders, etc. But the vast majority of people that have a mental illness fall into one of two categories: mood disorders and anxiety disorders.

Mood disorders include depression and bipolar affective disorder (manic depression). Think of the highs and lows in everyday life; you get upset when you are in an argument with someone; you get excited when a good opportunity comes your way. With mood disorders these highs and lows become "unreasonable". A person will become so sad that they forget to eat, or don't get out of bed for days, or so excited that they start to do dangerous things without thinking about the possible consequences. Their response is not proportional to the situation.

Of the two disorders I just mentioned, depression is the most prevalent. So prevalent in fact that it is recognized as one of the top reasons for lost productivity in the workforce. But what is not commonly known about depression is that it can affect more than just your mood; it can result in sleeping disturbances, fatigue, loss of appetite, inability to concentrate and restlessness. In addition to these physical symptoms, a person who is depressed may have feelings of worthlessness, fear, anxiety, guilt, and low self-esteem. They may not want to participate in activities that they normally do; they may even think or speak of suicide.

For too long it has been thought that people who are depressed just need to "deal with it", "pull their socks up", that they are just weak or lazy. That can't be farther from the truth. With new medical diagnostic tools, such as Positron Emission Tomography, commonly called a PET scan, doctors have found evidence that depression, along with many other mental disorders, are the result of a change in brain function. That is absolutely not something that anyone can control, or "will" him or herself out of. That is what

makes depression truly a disease. And just as any other physical ailment, there are treatments available. The possibilities range from counseling with a social worker or therapist, to psychotherapy with a psychiatrist or psychologist to help understand the disease and solve the problems that come with depression, to medications. Often times different treatment options are used in conjunction with each other and work better when used together. For example, a person may require medications but will also work with a psychologist to help them deal with the day-to-day issues of the disorder. The treatment options often run for different periods of time, for example some people may only take a medication for a few months, others may stay on medications for their entire lives. Unfortunately there isn't one answer that will work for everyone and that can be very discouraging for people. It truly is an individual disease and is treated as such. But researchers continue to look for both the cause and a possible cure that would work universally.

There is a lot that can be said about depression, its symptoms, some of which I listed earlier, its treatments and its possible causes; there are hundreds of books written about these issues. But I would rather just leave you with a few basic facts:

1. *It is normal for people to experience sorrow and happiness in everyday life. It is normal to be anxious after an event like September 11th. It's when these feelings become so intense they interfere with everyday life and persist for an extended period of time, that it becomes a mental health concern. In the case of depression, if a person experiences a number of the symptoms I mentioned earlier, consistently for two or more weeks, it is probably more*

2. *Depression is a disease. It can be as devastating and painful as any physical illness. When a person is mentally ill, they truly suffer from that disease.*
3. *Being mentally ill has nothing to do with motivation or strength of character, it is a change in the function of the brain that cannot be helped by the person affected.*
4. *There is help available. Being depressed is not a life sentence; it does not mean that the feelings a person experiences in the beginning will last their entire life. Using one or more treatment options, depression is a very treatable disease.*

If this article has highlighted some things that you have been struggling with and you think you might be experiencing depression, I encourage you to talk about it, with a friend, your don, a doctor at Health Services or someone at Counseling Services. If you don't feel you can approach anyone in person, there are anonymous ways of finding help such as the Telehealth Ontario at [www.health.gov.on.ca/english/common/contact.html](http://www.health.gov.on.ca/english/common/contact.html) or the Grand River Hospital Crisis Clinic at 749-3611. Either way, the sooner you seek help, the sooner you will start to feel like yourself again.

Mental health issues are just now starting to be recognized as illnesses and there is still a lot of stigma that surrounds them. I encourage you, whether you or someone you know has experienced a mental illness or not, to start to talk about these issues. The more we know and the more society as a whole becomes educated regarding mental illness, the more the people who are suffering from these illness can begin to seek treatment without being ashamed. As the stigma disappears, so too will the whispers.

## The Exotic Engineering Culture at Waterloo



Sung Hon Wu

2B Computer

A requirement of my computer engineering degree is that I have to take some "artsy" classes. Some of my friends went on the smart route and took REC 100. Unfortunately, I had this desire to learn when I was picking my courses, so I decided to take anthropology. The first thing I learned in the course was an anthropologist is a person who studies culture. Then I learned I had to write an essay. Describe a "sub-culture" you belong to and any special "knowledge", symbols, and events specific to that "sub-culture".

Naturally, the culture I chose to study was the engineering culture at Waterloo. So here are some preliminary study results.

Engineers have a lot of special "knowledge" which is known and understood only to those inside the culture. For example, all engineers know that they are superior to another tribe called "artsies". When asked for the basis of this fact, engineers would give a condescending look and say "well, it's a known fact engineer-

ing is superior to arts". They would say this despite studies that show the average engineer works in excess of 30 hours per week compared to the artsies 15 hours. It is highly probable that artsies made the superior choice is maximizing their leisure time.

Another piece of knowledge all engineers seem to possess is an innate collection of highly incomprehensible words. Words such as convolution, mechatronics, and Nyquist plots seem to be everywhere. What is even stranger is the habit of some engineers to introduce these sentences in their daily conversations with others. Sentences such as "The prof is so bad he is even worse than a convolution!" were noted and recorded.

In the engineering culture, the most important symbol is the "Tool". An oversized wrench, it seems to be held in reverence. The sight of the tool seems to awe all engineers who come across it. Once, when invited to an event called B.O.T., the "Tool" made an appearance. The effect it had is hard to describe. At first, the lights would dim, and the crowd would reverently repeat "Tool, tool, tool..." Besides repeating this slogan, the engineers made this motion like a cowboy about to lasso an animal. When the crowd had built itself into frenzy then the "Tool" would appear, making the

crowd climax in their passion.

Despite the importance of the "Tool", it rarely makes appearances. When asked about this, engineers will reply that the "Tool" has to be hidden and protected because other so-called "engineers" want to steal it. Although this is a completely logical argument to the engineers, it is hard to believe that an oversized wrench of little practical use was that relevant to the engineers.

As for special events, it is observed that engineers have two special times of the year. The first one occurs in September, during an event called "frosh week". This is some sort an initiation ceremony. Over the course of a week, a number of volunteers are led through an incomprehensible set of events before they are declared as new members of the community. Most of these events involve a ritualistic screaming of the phrase "we are, we are the engineers". In another event, the participants drive themselves into a frenzy competing for the affections of a group of poorly dressed people in black. Afterwards when interviewing participants, there seemed to be slight bemusement and embarrassment that they had willingly taken part in this event. Nonetheless, it is remarkable that even with all these strange events; there is always a large number of participants for frosh week.

The second key special event observed is an event called I.R.S. Held every year in March, it also seems to be an initiation ceremony of some sort. It is very confusing. The participants are people who have been in the culture the longest. In a long and formal ceremony, these people are given special rings. Then afterwards, they are led to a place where their clothes are ripped for no apparent reason. An even more odd observation was that some people enjoyed having their clothes ripped off. Even though not all participants drank alcohol and become intoxicated, all participants were observed afterwards screaming and banging against walls around campus as if they were.

Despite the bountiful data that has been recorded here, this is only a preliminary survey. There are many things which are still not fully understood. For example, the willingness of engineers to pay exorbitant amounts of money to torture themselves in work for many years, their main means of broadcasting relevant news (the Iron Warrior), and finally why many people still want to be part of this culture are not clearly understood. However, an important conclusion can be made from this study. Engineers from Waterloo seem to have formed a distinct and very unique culture different from those observed elsewhere around the world.

# Engineering Society Executive Reports

## Constitution Change: What you Should Know

**Josh Levitz**



**President**

I hope all is going well in the school world. It has been quite the first month to the term and so far, I think the Engineering Society is in excellent shape! We've gotten so many new faces out to events and the feedback I've been getting has been great. Lets keep it up!

In this article, I would like to comment on and explain the monetary issue EngSoc is having right now. As many of you know

(and many of you don't), at the first two meetings I read a possible constitutional amendment that would allow us to increase Engineering Society fees in two different methods. The first is through referenda on both societies (which is currently the only way to get the fees changed). The second, which is the new method, is through a vote at joint council in which the fee is changed by a percentage less than or equal to the Canadian Consumer Price Index reported by Statistics Canada. That's the short of it and I just want to let you all know why we're considering this.

EngSoc is a non-profit organization, and our entire funding comes from your \$14 fees. In the last few terms, we have been consistently losing money and we are get-

ting to the point that if we continue like this we'll have to significantly cut down on the quality and number of events EngSoc runs. We obviously do not want to do this as we are here for the students and want to provide as much as possible for all of you. Having said that, increasing your fees by a small percentage (3-5%, and only as needed) would help the society immensely. With attendance at events continually rising, we feel this is a justifiable and necessary course of action. This will also allow us to increase the amount of money we give for donations to school teams and clubs, improve the Engineering Society Office services, and just better maintain the overall state of the society. Benefits will be seen by not only those who attend EngSoc events, but the gener-

al engineering student population.

I will definitely keep you all updated on this situation, but I thank you in advance for your understanding and your support.

So that's really all for this article. Please let me know if you have any questions or concerns, or just general feedback. I'm always around if any of you need me, so come visit the Engineering Society office anytime. Take care, and just a quick reminder because I just realized it: Midterms are around the corner so its time to pull the plastic cover off your textbooks.

Josh Levitz  
bsoc\_prez@engmail

## Much is Brewing Outside

**Jeff Alfonsi**



**Vice President, External**

Much is brewing these days outside of EngSoc. We have conference applications out, ESSCO directorships available, the Ontario Engineering Competition (OEC-CIO), and some other jazz.

The Canadian Federation of Engineering Students (CFES) hosts an annual conference so engineering students across Canada can discuss ideas and give direction to the projects and initiatives headed up by CFES. This year the conference is in Victoria, BC, and runs from January 2-8. (That means a free trip to BC in the winter for all you snow boarders and skiers). Applications are now available online at the EngSoc website. Please submit them by October 15.

The annual, self-proclaimed National Conference on Women in Engineering (NCWIE) is held at Queen's University from November 14-15. The Conference is open to MEN in engineering too; in fact, one of the potential topics at the conference is a guy's perspective of WIE; chauvinists are especially welcome. Applications are also available from the EngSoc website.

Engineering Helps ([www.engineer-inghelps.com](http://www.engineer-inghelps.com)) is project intended to link engineering students with charities that somehow require engineering skills. As a

director, you would help promote projects that allow students to gain valuable experience (for coop perhaps) while benefiting the community. If you're interested, please send an email to Emily Kettel at [exec@essco.ca](mailto:exec@essco.ca). Along those lines, I highly recommend that you check out the University of Waterloo's ExCEED club at [www.uwexceed.com](http://www.uwexceed.com). Don't forget to regularly visit [www.essco.ca](http://www.essco.ca) for other events across Ontario, and although the applications for directorships ended a week before this article was printed, there may be some vacancies. ESSCO is good!

The Ontario Engineering Competition is being held at Queen's from February 6-8. Students get an opportunity to compete in seven categories ranging from debating, to presentations, to design projects. Plus there is some decent coin up for grabs. Details about the competition can be found at <http://www.engsoc.queensu.ca/oec>.

I would also like to extend an invitation to all the environmentalists out there. The Reusable Plastic Materials Soap Box Derby Competition is being held Friday, October 24 for Waste Reduction Week. Design a non-motorized car out of recycled materials and you could earn a cool grand. Think about how much gas you can buy with \$1000...joking.

Stay turned for some possible events with other faculties: movie nights with recreation, jazz nights with arts, and bocce ball with AHS.

If you have any questions about any of this stuff, just email me at [bsoc\\_vpext@engmail](mailto:bsoc_vpext@engmail). Peace out sreenigne.

## Request for Expense Forms

**Grant Holohan**



**Vice President, Finance**

There's not much to announce in the world of EngSoc finances this edition. EngSoc donations were completed at the third meeting. If your group's donation request was ratified in full or in part, you need to

fill out an expense form in the Orifice indicating to whom the cheque should be made.

As you may have noticed, B\*\*5 was moved until sometime in November. More details will come later.

That's all I have to say. Enjoy midterms.

*"If we all did the things we are capable of, we would astound ourselves."*

- Thomas Edison

## CECS Confident on Launch

**Emma Bardon**



**Vice President, Education**

Well, there hasn't really been a whole ton of stuff going on at my end of things. I met with Dave Thomas and Rick Roach of CECS to discuss the new online system, which is currently set to be fully implemented and ready for use in May 2004. This time they are confident of the launch date.

Over the summer term, teaching students participated in a pilot of the system. Overall their comments were good with their primary complaint being the method of uploading their resumes. Employers were also pleased with the system. There is still a small problem with the scheduling software but CECS plans to have that fixed and the system up and ready for January (though it will not be fully implemented until May). The current plan is to have the system available to us to use by April 1st so that we can take a peek at the new system before the first week of classes and the start of co-op. This also means that there (hopefully) won't be 5000 people trying to figure out the new system all at once.

Many people had concerns over different aspects of the new system, ranging from security to downtime to formatting of resumes. I was assured that the system was at least as secure as any other Peoplesoft system on campus, like Quest

or the Payroll system. The new system will require nightly downtime, but it should be significantly less than the downtime required by Access or Quest. The biggest unknown at this point is stability. Since the pilot was with teaching students (of which there are few), the ability of the program to handle a load of thousands of students at once is still unknown.

The big issue on many minds is how the resume works, and how to create one in html. Within CECS.Online, resumes are uploaded by copying and pasting html code into a window, and clicking an "upload" button. This will strip the code of any unsupported features (pictures, unsupported fonts, sparkling lights etc.). You can then view the uploaded resume to ensure that it looks the way you wanted it to. The stripping feature is present in order to save space (flashy things can make files huge). This also levels the playing field somewhat for students unfamiliar with using html. The html editor officially supported by CECS is Netscape Composer. This is downloadable for free from Netscape. For anyone worried about having to learn how to code, the formatting window for this program works very much like Word - you can change font, size, italics, bold, and any other formatting features using buttons or menu commands rather than having to actually learn the code. There will be an introductory session on html resumes later this term, likely in November after most midterms have come and gone.

Good luck to everyone going through interviews this term!

## Gemuetlichkeit: October 16

**Sarah Sirega**  
3B Civil

Come one, come all to the University Oktoberfest night at the Kitchener Auditorium this Thursday, October 16. Schools from across the province will be making the pilgrimage and students from all disciplines will be kicking back and enjoying themselves.

Tickets for this event cost only \$15 and this includes the price of admission and transportation to and from the event. Buses will be running throughout the night between the SLC and the Aud. Oktoberfest tickets are always selling fast so come on out and get your ticket from Betty in the Engineering Society Office.

Ziggy zaggy ziggy zaggy. Hoy! Hoy! Hoy!

## Frosh Mentoring Success



**Matt Strickland**  
Vice President,  
Internal

Well, since I last reported for the Iron Warrior, a lot has been going on in the Engineering buildings. These past two weeks were chock-full of activities including EngSoc's Three-on-Three Basketball tournament, a cake decorating contest, Une Tour de Pub, and a Laser Quest trip. This past weekend saw the term's Engineering Semi-Formal well attended with about 100 dappered-up students putting in appearances at the event. Finally the 2A Software's Scun-TV filled this past Friday and early Saturday with hijinx, stunts, games, road trips, and memorable pictures. Congratulations to everyone in Engineering who helped thoroughly teach the Mathies a thing or two about havenging.

Another important milestone was reached this past week in our newly redeveloped Frosh Mentoring program. The two directors involved, Kiran Dhaliwal and Rahul Bhardwaj, took a rather obscure and seldom-used directorship and completely turned it around. Their mentoring messageboard now counts a membership of over 350 first years—over one third of this year's frosh. This past week they also organized a get together for mentors and frosh to meet face-to-face. With other faculties, putting together their own Frosh

Mentoring programs, we hope that ours continues to break new ground and eventually grows into a well-established branch of the Engineering Society. For more information on how the get-together went and on how to get involved, look no further than directly below this exec report.

What's coming up in the near future? Even though mid-terms are fast approaching, there are still a handful of events being planned before crunch time begins in mid-October. This week marks the first B-Soc charity event of the term with a jelly bean guessing contest. For fifty cents per guess, you can both support a local charity (Reaching Out to our Outdoor Friends, a KW charity for homeless youth) and maybe win yourself a jar of jelly beans. Enter the contest in CPH Foyer any lunch hour this week. Finally, an Octoberfest trip is being planned of October the 16th. Look for posters with information about the event around Engineering and even inside this very issue.

Well, that's all for this week, folks. Remember, to receive up-to-the-minute e-mails about what's going on in Engineering, send a blank e-mail to eng\_s o c \_ b \_ g e n e r a l - subscribe@yahoo.com. It's the best way to stay informed about EngSoc happenings. Finally, I'd just like to close by reminding all first years to have their class names in to us as soon as possible. We've seen a lot of rude, clever, and all-round good names being announced. Keep up the good work!

## Refunds are Finally Over



**Erin Young**  
WEEF Director

Refunds are finally over. The WEEF participation statistics will be posted in the next issue along with a little section of "What has WEEF done for me lately?" For those of you who have no idea what that mysterious \$75 does then you'll definitely want to check out this article.

Proposals have opened up Monday Oct 6. They will be running until November 7th. Remember that late submissions will not be approved. Please follow the directions on the WEEF website for Proposal Submissions, and use the format provided on the website available at <http://www.weef.uwaterloo.ca/proposals.html>. If you have any questions, feel free to drop by the WEEF office and talk to me, the WEEF director. As always, you can email [weef@engmail](mailto:weef@engmail).

In the Fall 2003 term, WEEF, the Waterloo Engineering Endowment Foundation, will be spending about \$35,000. The \$35,000 will be allocated to proposals designed to improve the quality of undergraduate engineering education at Waterloo. In the past, these have included laboratory equipment, computer upgrades, teaching facilities, and support for student projects such as Concrete Toboggan, Midnight Sun and many more. However, not all proposals lie

within the mandate of WEEF: We cannot provide funding for proposals that are not directly related to undergraduate education. We will not fund projects that should clearly be financed through other sources (e.g. repainting the DC or paying for a professor's time). We cannot spend more than \$35,000 this term, but very large projects could be spread out over two spending cycles.

There will be a WEEF presentation meeting: time, date, and location TBA. Depending on the number of proposals received, this meeting may be divided into two parts with the second presentation meeting being held later. Times and locations for these meetings will be posted on the web site and on the WEEF Office door as soon as it is decided. A WEEF rep from every engineering class will attend this meeting(s). If you submit a proposal, you will be required to make a 5 minute presentation to explain and answer questions about your proposal during this meeting. If you do not present, you WILL NOT be eligible to receive any funding!

WEEF reps will meet again after discussing the proposals with their class. At this time, a vote will be held to determine how to allocate the \$35,000. All class WEEF reps should get in touch with me very soon.

WEEF will be having regular office hours. They are as follows:  
Monday 3:30 - 4:30  
Tuesday 12:30 - 1:20  
Thursday 12:30 - 1:20

## Mentoring Get-Together Enjoyed By All



**Kiran Dhaliwal**  
2B Electrical

On Monday September 29, the first get-together of the Engineering Society B Frosh Mentoring program took place in POETS going from 6pm onwards. The showing from both the Mentors and the Frosh was good, which led to a great evening of meeting, greeting and pizza-eating. Surprisingly, despite the Microsoft info session running at the same time there were a sizeable number of Mentors and Frosh from both the Electrical and Computer Engineering and Systems Design Engineering departments. Whether this shows that Elecs, Comps and

Syssies are really helpful or just need really help is debatable, but in any case there was a great turnout from these students.


Frosh were able to learn about all sorts of topics relating to university life, from EngSoc activities to study tips for exams. Garrett, from 4A Mech, is an example of a Mentor who was busy spilling out advice by not only giving Frosh tips on sprucing up their resumes but by educating Frosh and some younger Mentors on the rules and procedures of the ever-popular nautical part of engineering tradition. Cheng and Ray from 1A Systems were examples of happy Frosh who really enjoyed socializing with and meeting older students in their program, even though they were hanging out with Karim, from 2B Systems, for much of the night.

Although this get together was a great

demonstration of the learning opportunity that the Frosh Mentoring program provides, it does not quite show the tremendous involvement of Mentors and Frosh in the online web mentoring. There are over 300 Frosh and 125 Mentors registered through the Frosh Mentoring online community that allows first-years to post questions regarding co-op, coping with school, living away from home etc. and gives Mentors a chance to answer these questions quickly and efficiently over the web to the benefit of everyone who visits the site.

As one of the directors for Frosh Mentoring, I would like to thank everyone who has been involved and especially those that came out on Monday. If you are interested in getting involved, check out <http://engsoc.uwaterloo.ca/www/froshment/> for more information.

ENGINEERING SOCIETY



C&D

Did you know you can earn valuable P\*\*5 points for volunteering time at the C&D? Email Mary Bland at [mbland@engmail.uwaterloo.ca](mailto:mbland@engmail.uwaterloo.ca) to schedule your shift.

## Upcoming Events from EngSoc

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	
12	13	14	15	16	17	18	For more information on the P**5 points, visit <a href="http://www.engsoc.uwaterloo.ca/www/p5.php">http://www.engsoc.uwaterloo.ca/www/p5.php</a> Follow the link to make an online submission
	Thanksgiving			Oktoberfest	MOT P**5 Deadline		
19	20	21	22	23	24	25	
					Halloween	Fall Convocation	
26	27	28	29	30	31	1	
			EngSoc Meeting #4		MOT		

## Columns

# Is Software Engineering Actually Engineering?

Jay Liu

3B Computer



I was going to write an article complaining about the uselessness of the Internet. As it so happened in the meantime, I was fortunate enough to attend a seminar about professional engineer licensing in Ontario, where I was grilled on the question of defining engineering and software engineering.

I am training to be a computer engineer. At least, that's what I've been led to believe. But unlike traditional engineering professions, there is a lot of soul-searching among software-oriented engineering students, a group with which I find myself being associated. Many people find the term "software engineering" meaningless. Many others believe software can never be "engineered". There is a well-versed skepticism among current influential professionals that software development is not worthy of being called professional engineering. Critics accuse universities of creating "software engineering" programs for the sake of pushing more people onto the unproven and unstable bandwagon of information technology.

### What is engineering?

It ultimately comes down to what we mean by "engineering". The word "engineering" refers to the job that is done by an "engineer". Who is an engineer?

Webster uses "engineer" to attribute builders of engines. Being obviously outdated, that gets us nowhere.

The most colloquial explanation of engineering is the application of science to social problems. That is why engineering is still being referred to as applied science at many places, the most notable being the overrated FASE at UofT. The objection to software engineering is that there is very little science involved, but rather it is the codification of mathematical theories. Engineering involves the construction of something physical that would need to obey laws of nature, like a circuit, a bridge, or a new fibre. Software development yields nothing physical. A failed hard drive can make a sophisticated piece of software appear never to have existed. The power of software is not limited by physical laws, but rather by the ability of the developer to express what is conceived in a structural form. The most abstract mathematical equations, which may bear no physical interpretation, can be codified, and by doing so, software is in no way an application of science, but rather a new medium to express theoretical mathematics.

This view of engineering is rather old-fashioned, and to a certain degree also somewhat irrelevant. To advance this article, a distinction is hereby made between engineering and professional engineering. The distinction is by no means subtle. In fact, this is where the old argument loses. You do not need to be a professional engineer, or an engineer in training for that matter, to engineer. Anyone can engineer.

Anyone can make something. Engineering is when bored Grade 6 students make paper planes during English classes, an activity that is inexplicably discouraged by educators. Engineering is when a homeowner puts an extra brick to stabilize the fence. Engineering is when a burglar throws a Coke can to fool the motion detector. The act of engineering is the applied realization of scientific or common knowledge to solve social problems. It is to make a paper fold in a certain way so that air can lift it up and carry it to the teacher's desk. It is to apply the laws of gravity to battle against natural disturbances. It is to use past experience with existing technologies to devise a low-cost effective response as allowed by physical laws.

None of the three subjects under examination necessarily had an engineering education.

### What is professional engineering?

It is now a fine time to define "professional engineering". As the term suggests, professional engineering requires a degree of professionalism. Professional engineers are licensed through a vigorous (i.e. bureaucratic) merit-based (i.e. taxed) system (i.e. inefficient structure) which requires years of higher education (or monetary substitutes) and relevant industry experience (i.e. mountains of paperwork). Then, is professional engineering an extension of engineering with more skills (and money) and paperwork?

The argument of critics goes back to the fact that engineering must involve a component of physicality. Since professional engineering is engineering, it is said that professional engineering must also involve a "real" product. That assumption is flawed. The building of circuits and construction of bridges as examples of engineering are irrelevant in this discussion because those physical constructions do not factor in the definition of professional engineering. It is obvious that an engineering degree is not needed to become an assembly line or construction worker. The only requirement there is to put a brick on top of other bricks or to fit a resistor onto a board is physical effort. If you are not lazy, you can help build a Pyramid or the Great Wall of China. With some added skills, you can control the cranes or screw doors onto the SUV.

It should be self-evident that none of the above described tasks fit the profile of professional engineering, even if the term "professional engineering" is yet to be defined in this article. This shows that professional engineering does not necessarily involve the physical construction of an object. Since such physicality is not a necessary condition, it becomes an optional component of professional engineering. Sure, the professional engineer may know how to build a brick wall, but that does not characterize professional engineering. Therefore, the focus of professional engineering must be distinct from engineering, and it must lie elsewhere. That "elsewhere" is design.

### To architect or not to...

Professional engineering is a separate process from general engineering. It is the

step before physical construction of solutions. Professional engineering is when ideas are formulated, models are sketched, prototypes are created, and the designs are tested. It is not to build solutions to problems, but rather refers to the process where solutions are sought to solve a particular problem. Labourers built the Pyramids and the Great Wall of China, but they would not have been able to construct such magnificent structures without the extraordinary achievements of the professional engineers who designed those structures. Professional engineering does not involve the actual realization of the solution. The task is to create a solution that can be realised. Here arises the engineering part of the job. The solution must be first and foremost realisable. It must be usable. A solution that cannot be realised is not an engineering solution, for it cannot be engineered. It doesn't matter who can realise the solution. Maybe high school kids can do it, or maybe a team of NASA technicians are needed. That is not a concern. The point is that the solution must be realizable. If it cannot be realised, it becomes a theoretical solution, and will no longer qualify as engineering.

And this is where professionalism comes in. The engineering specification requires that the solution is technically sound. Professional requirements necessitate that the solution is also socially sound. The product has to be safe. It must pose less danger than the problem it solves, and any such risk must be fully disclosed. It must be cost-effective, resource-efficient, and reliable. It must be environmentally responsible, considerate of human resource, etc. In other words, professionalism is social responsibility. That is why professional engineers have a code of ethics to which they adhere, and that is why they are willing to be held legally accountable for their mistakes.

### Software engineering

Software engineering – rather, professional software engineering – now becomes a tangible term. It is the responsible design

of realizable software solutions to solve real problems. While browsing the newly opened MIT OpenCourseWare, I came across their "6.170 Laboratory in Software Engineering" undergraduate course, where the introductory paragraph reads: "You will learn how to design software, ..., how to be an architect, not just a low-level coder." That neatly sums up the goal of software engineering, and professional engineering in general: it is to design, and design well, and not to labour over implementation details. A professional software engineer may know how to code in Java or Smalltalk, but that is not the focus of her job. It is to design a solution whose implementation is arbitrary and irrelevant. The important part is that the solution can be realised and serves the prescribed purpose. That introductory phrase could easily have been reworded for civil engineering students, for example: "You will learn how to design bridges, ..., how to be an architect, not just a brick layer." Learning the syntax of C++ is not difficult. Designing a language-insensitive program that serves a useful purpose correctly is.

Software engineers are not computer scientists with mandatory MSci 261 credits, either. They are fundamentally different from each other just as electrical engineers are different from physicists. The interests of scientists into subjects are primarily theoretical, secondarily practical. The interests of engineers, on the other hand, are solely practical. If a solution cannot solve a real-life problem, regardless of how neat it is, it is useless. Engineers may apply theoretical research results to solve a real-life problem, but the key here, again, is the application of theory, not the development of theory. That is why computer science and software engineering have quite distinct focuses, and are therefore very different from each other. If such difference is imperceptible to most people, it is an indication of failure on the part of the educators to train and promote software engineers adequately, rather than a sign of failure of the software engineering profession as a whole.

## Putting Down Roots



Designed by 3B Architecture student Jonathan Wong, the work is called Waterloo Roots and won the CECS design competition earlier this year.

Constructed out of maple and walnut wood, the "sculpture" is composed of three intertwined and interconnecting branches, which represent the dynamic yet balanced relationship between co-op students, businesses, and the university. Its organic-looking structure carries the themes of growth, sus-

tenance and resilience, and its innovative design and fabrication are a marriage of art and engineering. As per contest rules, much of the wood used to create the art work comes from a significant maple tree that once stood on the site of the new building.

CECS acknowledges the support of WoodWORKS! and the Grand Valley Society of Architects whose generous financial contribution made construction of Waterloo Roots possible.



## POINT VS. COUNTERPOINT

## Are same-sex marriages acceptable?

Chun Lam  
2B Chemical

“Going to the chapel and were gonna get M-A-R-R-I-E-D; Going to the chapel of love” (insert musical interlude here). Ah yes, this song by The Dixie Cups brings back great memories to our parents, those baby booming era people who’s fascination with Elvis and his swinging hips, or of those mop top Beatles still fascinates (and embarrasses) us to this day. However, may the song Chapel of Love now be revered and enjoyed by not only a bride and groom, but a bride and a bride or a groom and groom? That’s right! After a long and bitter struggle over the last half-century, people who are engaged in same sex relationships may soon have the right to marry. Currently, through bill C-23, same sex couples have the same tax and social benefits as heterosexual common-law relationships. However, there is still that feeling of being a second-class citizen for homosexuals, who may now choose to, shall I dare to say, Marry. Yes that word, the supposedly sacred word from a time when the earth was created, before the time of Jesus, Jeremiah, Cain, and Jebodiah, a time of absolute holiness. Well, those rainbow warriors will get their chance to have their marital unions recognized by the government of Canada as such, if the proposed legislation is approved by Parliament. The proposed change to the Marriage Act is the definition of marriage. The definition will change from the ‘lawful union between two, each of the opposite sex’ to a ‘lawful union of two persons’. Of course, this legislation will take time to go through the due process of Parliament, but the ethical debate rages on with the slinging of religious, moral, democratic, human rights rhetoric and dogma between the pro and anti same sex marriage groups.

The constant, sometimes vicious, debate between pro and anti gay marriage is over one question: Is gay marriage acceptable?

I believe it is acceptable for people of same gender to engage in the ultimate pinnacle of relationships, marriage. I guess now I have set myself up for a barrage of hate mail in my e-mail account, but as a fellow classmate said, hate mail is better than spam mail.

For this argument of accepting same sex marriage, I will list some of the arguments that the anti-same sex marriage side has used in their...crusade. Living in a country where people are innocent until proven guilty, it makes sense to apply this concept to the issue and see if arguments to ban same sex marriages are valid in terms of society’s safety, and well being. There are several arguments to not accept same sex marriage; the ones listed below are the most meaningful ones:

*Marriage is only between a man and a women because of the natural laws of god, nature, etc. proclaim it to be*

This is the most prominent argument being proposed by the anti same-sex marriage groups. Homosexuality goes against the laws of God and so it is bad. Well I guess a reality check is in order here, we

live in a society where laws are made by a small number of people chosen by the masses in fair electoral processes. This small band is called a government and they make the rules that people abide by. Ethical ideas of religions have contributed to laws – i.e. laws against killing other humans, stealing property. However, the religious idea that homosexuals are a threat to society is a far-fetched one at best, as it hasn’t been shown that homosexuals act in a manner that degrades society, like what a thief, or murderer would do.

*Same sex marriages would affect the stability of heterosexual marriages and thus the fabric of ‘civilized society’*

There is no scientific evidence to further support this idea but, giving it the benefit of the doubt, ask yourself this - you are in a loving relationship with an affectionate other living in an apartment and a homosexual couple is your neighbor. Are you going to suddenly going to dump your partner and go after someone of your gender? The notion of spontaneous gender preference sounds like a really bizarre Chem. Eng theory, but it doesn’t have any logical reasoning.

*A main function of marriage is procreation*

This argument seems a bit extreme in its end product - that all people must have offspring when they tie the knot. What about heterosexual couples where one person is sterile, incapable of having children, or if the couple decides not to have children? Then are these couples damned from the world of marriage? Couples who fall under this category and are religious and don’t have offspring are still allowed to practice their religion as man and wife.

*Men and women are different, and so children in a family need the presence of a mother and father*

This is a psychological development argument that attempts to tie the idea that homosexual cannot raise children to be contributing members of society. Currently, there is not any credible scientific psychological study that proves this idea. Also consider widowed families where one parent is raising the children. Are the children in those families going to be future criminals? There are many examples of families where one parent has raised children successfully in becoming law-abiding members of society.

Of course, these are the most respectful arguments being propped up by the against side. All of these arguments are based on religious hearsay that has not shown that homosexuals are a danger to society and its members. Other than these arguments, the against side is using emotion and scare tactics to push their side. For example, in Calgary, Alberta, Bishop Fred Henry is quoted to saying on the proposals by the Prime Minister, “He’s putting at risk his eternal salvation. I pray for the Prime Minister because his eternal salvation is in jeopardy. He is making a

*Continued on page 15. See No Adequate Proof Against Same-Sex Marriages*

Anonymous

The definition of marriage, even according to Webster’s Dictionary, is a union between a man and a woman. The Catholic Church, all Christian Churches and most other religions consider the act of marriage a sacred one - a holy bond between husband and wife.

The Catholic Church believes “By reason of its very nature, therefore, marriage exists for the mutual love and support of the spouses and for the procreation and education of children. These two purposes, the unitive and the procreative, are equal and inseparable. The institution of marriage has a very important relationship to the continuation of the human race, to the total development of the human person, and to the dignity, stability, peace, and prosperity of the family and of society.” Obviously, procreation is not an option for gay couples. This goes against God’s plan for the human race.

Children that are adopted and grow up with two parents of the same sex are being denied full emotional and social development. It has been said that such children grow up more open and accepting. This may be true, but is it possible that they are too accepting? And why are they this way? Because of a constant barrage of abuse from other children and adults. No matter how loving the parents, the child will suffer because of their choices, needlessly. How will that child view relationships as he or she grows up? Will a young boy growing up with two men be taught that it is wrong to have a relationship with a woman? How about a young girl growing up with two women? Or that same young girl growing up with two fathers? Will they teach her about the more feminine aspects of her being? Will they tell her that it is right to date boys... or girls? There are so many more questions to consider when bringing a child into a gay family – this is just the tip of the iceberg.

Redefining the term marriage cheapens it. The definition of any term, when broadened, lessen the term. For example, saying “Let’s get some Chinese food

tonight” does not imply that the food will be in any way authentic these days. The bastardization of a word, such as marriage, lessens what married couples have. The definition of marriage was changed when divorce was allowed, and now the term marriage means so little to the public social conscious that any one can have five, six, seven, or as many marriages as they want - it shows that the terms “Till death do us part” mean little. By expanding the meaning of marriage further, it lowers the supposed sanctity of the institution by another level.

Another consequence of allowing the change in legal definition of marriage is more sinister. “Marriage between two people that love each other” could lead to incestuous relationships—where in that definition does it state it would be wrong for a father to marry his daughter? The connotations of that definition are frightening.

Allowing homosexuals to marry goes against all that religion teaches us. It is immoral and if allowed will alienate yet another group – the religious community. Is nothing considered sacred anymore? If this is allowed, why not make it okay to murder – that too is stated in the Bible as something that a person is not allowed to do. It may seem extreme, but who is to say what is right or wrong anymore? It seems that our government no longer cares about what is said in the Good Book, on which a person is still made to swear on in court.

Thus, in closing, it is wrong on many levels to allow homosexual marriages to be sanctioned by the courts. It is wrong in that it contradicts the teachings of religions that have been around for longer than the country of Canada has been. It is wrong in the implications it will have on children brought into these “unions.” And it is wrong in that the proposed definition of marriage will leave the door open for incestuous relationships as well.

**Editor’s Note:** Point vs. Counterpoint is intended as a forum for objective and thought provoking debate on various issues. The views and opinions expressed here do not necessarily reflect those of the author(s), the Iron Warrior, or the Engineering Society.

## Are you graduating?

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## Columns

## What Does F.O.C. Mean and Why You Should Apply

Justin Bishop  
Engineering F.O.C. 2003

Many of you participated in the last Orientation Week in some form or fashion and it is fast approaching the time for Laura, Grant, James and I to hand the reins over to four enthusiastic individuals so that they can begin planning Orientation Week 2004!

First and foremost, all of the requirements for the position can be found in detail at <http://eng.uwaterloo.ca/~foc> but the basic things to keep in mind are that you need to be a full time student now, and during the Week itself. This means that if you are graduating in June 2004, you are no longer eligible to apply. Co-op is considered part of your degree requirements and so you are still considered full time. You must also be in good academic standing, and that only really means not failing. Other than that, there are no pre-requisites really to speak of.

So, to the jobs: there are four positions available, ideally two from A Society and two from B Society, but not necessarily. There are two Headcom and two Superhuges and each role has its own duties and responsibilities. Both, of course, have their perks. The four successful applicants will form the Engineering Orientation Committee which is one of the 14 committees comprising the Federation Orientation Committee, or FOC.

The distinction between the jobs of the four Eng FOC is only apparent during Frosh Week itself since, in general, you will be working together as a team for the preceding 10 or so months to get the Week in shape. The Headcom oversee the activities and organization of the Edcom while the Super Huges manage the Huges and Bigs. The Headcom also spend a lot of the

time in the limelight of the event, as do the Edcom and, lesser so, the rest of the leaders. The Super Huges tend not to be seen as much and instead make sure the event is running smoothly and take care of any unforeseen issues that may arise whether with the colour groups themselves or with the myriad of other parts that make or break an orientation week.

Some of the key things that the FOC do leading up to the week are:

- Obtain leaders, by application, interview and then selection
- Place orders for t-shirts, hard hats, frosh kit goodies
- Arrange for sponsorship
- Create and submit risk management forms detailing each event in detail
- Coordinate and arrange the booking of rooms, any services required of Plant

Operations, Fed Hall, the Bomber, UW Catering Services and any other on/off campus organization necessary to make the event a success

- Create mailouts and other literature for the incoming students
- Liaise between the various engineering discipline offices and the Feds

Throughout the entire time, you will work closely with the 14 other Orientation Committees and attend meetings and retreats as necessary.

The job of FOC is one with a lot of responsibility and a lot of rewards. The four successful applicants are entrusted with the orientation and welcoming of hundreds of new engineering students.

If you feel that you are up to the task, then there's a job waiting for you! To apply, simply follow the instructions at: <http://www.eng.uwaterloo.ca/~foc/focapp.html>. If you have any questions, fire off an email to [orientation@engmail](mailto:orientation@engmail).

## We Can Do a Lot Less and Still Ensure our Survival

...continued from Page 1.

eties people dreamt of in the 50s where people can just lounge around while the robotic maids whiz by? What is the goal of human progress? Are we doing this to ensure our survival? We can do a lot less and still ensure our existence, it's not just about survival. Are we living better? We're certainly living longer, but do I want to live to 90 just so I can work till I'm 75? That's really pathetic. What's wrong with us?

Second part: we have to put up an act. Act like a promising, naive, eager young student fresh to the world in front of the CEO's and their secretaries. That's basically what professor Smith said. Don't bother with people you don't think will help you succeed. Always carry resumes with you so you're basically a mobile, in your face, telemarketer, out to sell yourself. People around you are either a potential target or just landscape. Think like a hunter. "Oye, 'ere we go, she's a beauty, a nice fat juicy CEO ripe for the picking, I'll just step over this coworker and stalk my prey slowly, wait for the right time, I'll catch her off guard soon enough. Stupid intern, get out of my way!"

Last part, that if we're not doing like he said, we're wasting our lives. It's true, I can probably do a lot better than how I'm doing now. I never worked a co-op job where I was considered an exceptional employee, I've had good and bad work terms. I think I'm pretty average overall. Average is supposed to be bad as I was told in this presentation, I'm one of the guy that is wasting his life.

I'll admit it right now, I have no intentions on giving the 110% on my job, unless my job is an astronaut or a rock star or an orphanage worker or something similar. Face it, most of us will be working in jobs, not life passions. I'll do my best to do a good job at work, but I don't want to commit my entire life to it. A boyfriend of a friend of mine is working in Hong Kong right now, his job requires him to stay at work 7 days a week and pass dinner. He's making good money, gets a free apartment and rides to and from work and includes meals, but so what? Unless I can retire at 35 or something there's no way I would

even consider something like that.

I also have no intention of putting on an act at work or carry a resume wherever I go. I'd rather just get along with my coworkers and have a nice work environment, I don't want to see them as obstacles and I need to go around. And I don't want to alienate myself from any possible interpersonal relationship by trying to "sell" myself to everyone I see in a suit. Would you want to hang out with a guy that's always trying to sell you Tupperware?

I guess all I really want to say here is that you shouldn't get too caught up about being "successful" and forget about everything else. I'm not trying to preach, but you should always think about what you're really working for. Hopefully you're not working for work itself. If you're working to own a Porsche, that's fine, just make sure

## There's Something Interesting Going On

...continued from Page 1.

Access: Make contact with the most senior person you can. The first success story was a student being introduced to a visiting European CEO by the CEO of his co-op placement. He immediately held on to the guest by offering his hand and said things hard for him to disagree, e.g. "There is something interesting going on at (insert the name of his company/industry/location)". Of course, he did not forget to produce a "young and dopey" looking smile and a copy of his resume. (See how handy it is?). With adept application of the subsequent strategies, he was flown to Europe for a placement. Unfortunately, the model already failed me since the only time I saw the CEO of my last job was within an honorable, at-least-20-meter distance during a meeting of over 200 employees.

To encourage the likeness of me, Prof. Smith presented his second success story of a co-op calling a CEO's office to express interests in "profit[ing] from his example". Lacking anything creative to say have I practiced the same, I sincerely hope sending the secretary a pillow through FedEx might

you actually have time to drive it. Always think about what your real goal is. Just like what Eliyahu M. Goldratt said in "The Goal" (one of my co-op employers made me read it), it basically says the goal of any business organization is to make money, not to increase productivity, not to improve quality, or reduce cost, and any of those things that people tend to get caught up with. In life it's the same, except your "goal" hopefully is not to make money. Work for the family you may one day have, or work for the one you already do. Work so you can live comfortably, work so you can take the boat out on the weekend to go fishing, or go skiing in the winter, so you can retire comfortably. Don't let your work define your life unless you really want it to. If you working for a cure for cancer than go right ahead and let it define your life. But if you're not, spend the time being with people you care about, spend it playing in your

make myself memorable.

Persistence: Manipulate others into commitment or better yet, make them owe you. The student above did not reach the CEO either, as you may have guessed, but he followed up until the secretary arranged a meeting of 5 minutes for him. Upon hearing the meeting was cancelled, his puppy-look awoke the secretary's inner-guilt, and he played the debt to his advantage.

Ideals: Specifically, those not necessarily your own. Now, had you played your cards right, you are probably getting an interview, which is the beginning of impressing the employers further. Research is the key and not just the fact that the company has x numbers of employees. Read the news to find any challenges the company is currently facing and offer the solutions you read from the same source.

Another tip from Prof. Smith for the interview was to keep on talking as long as you are not told to shut up. "Your job is to get a job. Do you run the risk of pissing the guy off? Yes!"

Profit and scholarship: This is the hottest of

horrible sounding garage band, at your soccer team that don't win a single game, read a book that's not work-related, try out weird restaurants, soup up your car, paint a crappy looking painting, go on a trip.

So, if more people were to adopt that attitude then maybe our lives won't get harder and harder. So everyone just take it easy, the world can become a better place. If you are going to push your employer's hot buttons, make sure you know what you're getting into. You might be able to get the top jobs, but the top jobs probably mean long hours and high stress, not to mention all the people you'd probably have to manipulate to get there, according to professor Smith. I'm probably not pushing any hot buttons of any of my potential employers for saying this stuff, oh well. And yeah, "hot button" sounds pretty bad, I know most of you are thinking clitoris.

them all. At the end of the day, you are only hired because the employers believe you are going to make them more money. It is achieved not by following instructions, like the Joe Blow sitting in the next cubicle, but real insights, which requires a foundation of profound knowledge.

As the hour of sharp-tongued jokes drew to its end, I came to the sudden realization that the notes I took were nothing new to me. It is a rerun of co-op 101 from first year topped with 60-minute full of Smith-ish cynicism. (The 1A 8-streamers, look forward to GENE 10 on your 1B schedule.) Nonetheless, it was something entertaining and hitting the spot for an embitter individual (i.e. me).

At the end of the presentation, the club president announced that their subsequent guest speaker would be Barbara Stymiest, the CEO of Toronto Stock Exchange. Had Prof. Smith not pointed out, I undoubtedly would miss the perfect opportunity to impress a CEO. Sure enough, I shall not fail to bring a copy of my resume and to look young and dopey along with the rest of the 300 attendees in the room.

# Election Wrap-up

## Campaign Promises and Results

*Jeff Henry*  
4N Computer

In what must have been a most satisfying victory speech, Dalton McGuinty emphatically thanked Ontarians for choosing change. He continued with: "They have chosen more than just change. They have chosen something more profound. They have rejected a negative message and chosen a positive one."

Party	Elected	Popular Vote
Liberal	72	46.45%
PC	24	34.64%
NDP	7	14.70%
Other	0	4.21%

Indeed the Liberal campaign prided itself on taking the high road on television commercials and in everything that came out of Dalton's mouth. But that positive message proclaimed a lot more than just abstract change as their two hundred and thirty seven page platform document, by volume, should indicate. "We'll make our share of

mistakes," McGuinty said about what will be at least four years of governing ahead of his party, "But we will succeed."

The Liberal platform embraced a change in the way government would work under a Liberal regime citing multiple measures they would implement to improve democracy in this province. However, with a majority of forty-one seats in the Legislature there is some doubt as to how many of those democratic measures, or the rest of their platform for that matter, that they will actually implement.

For those of us who take the time to cast ballots in elections, it is our responsibility to hold the government and our MPPs to account next time an election is held; so, the summary of the Liberal plan (below) is a comprehensive look at what the new government of Ontario has promised its citizens over at least the next four or five years.

And on a local note, the former Deputy Premier and Minister of Education, Elizabeth Witmer, was re-elected and shall be the voice for Kitchener-Waterloo in the Legislature over the next four or five years.

Candidate	Party	Vote Count	Pop. Vote
Elizabeth Witmer	Progressive Conservative	23958	43.08%
Sean Strickland	Liberal Party	22455	40.38%
Dan Lajoie	New Democratic Party	6084	10.94%
Pauline Richards	Green Party of Ontario	1174	3.19%
Lou Reitzel	Family Coalition	949	1.71%
Owen Alastair Ferguson	Independent	242	0.44%
Julian Ichim	Independent	153	0.28%

# Election Followup

*Liam McHugh-Russell*  
FEDS VP Education

The provincial election is over and with it an eight-year reign of the PC party. Replacing them are the McGuinty Liberals, who encouraged voters to 'choose change'. And choose change they did: with 72 of 103 seats, their mandate is stronger than any in the 1990s. In fact, this is the worst defeat the Tories have ever had in Ontario.

It isn't often that Waterloo students get to have such a large impact on tuition levels, funding and financial aid in such a short time. Usually, it takes years of lobbying the provincial government before they take actions that match with stated student demands. The election changed that. Lots of students, more than usual according to many accounts, were a part of that process.

The Liberal majority will probably be a mixed blessing to students. They promised a 2-year tuition freeze, a tuition voucher for the neediest students, and new funding for universities. What promises they will deliver on, however, and when they will be delivered remains to be seen. Moreover, a tuition freeze may mean decreased funding overall - a crushing blow to Canada's worst funded universities.

At Waterloo, the shadow of the election fell on both sides of election day. Many students learned about issues, parties and platforms during the election, which meant an increased participation in the election from a usually apathetic demographic. The Federation of Students had a large part in

that effort. We wanted students to make an educated choice; to make a difference in this province. We wanted to make it as easy as possible for students to vote.

The Federation of Students distributed a pledge that was signed by over 800 voting students, ran buses to polling locations, and had an info booth set up in the SLC. The pledge could have gone better, but from talking to students and hearing about turnout, it seems that many of them did hear the word: provincial politics can make their life better or worse. I was especially impressed by the interest from engineers.

"The polling station in the great hall [of V1] was quite busy," said Dave Leeson, returning officer for the Kitchener-Waterloo riding. He also noted that a large number of off-campus students were voting as well. "A few hundred students filled out the F-20 form, which is the form (students needed) to vote on election day."

He noted that, "Certainly we had a much greater number of students voting than we did in previous elections," but cautioned that the number may be inflated as the last two provincial elections took place in June and orientation week, respectively.

Questions surrounding new spending by the Liberals are bolstered by a less powerful NDP - they ended up with a higher portion of the popular vote this election, but won fewer seats and do not have official party status. The Ontario Undergraduate Student Alliance points out that only the NDP signed their pledge to freeze fees, invest in access and restore funding.

Education	Commitments
	<ul style="list-style-type: none"> <li>Guarantee 75 per cent of students meet or exceed the provincial standard on province-wide tests within five years</li> <li>Put a "real cap" of 20 students per class in JK through grade 3</li> <li>Make reading, writing and math mandatory in each teaching day</li> <li>New Teacher Mentoring program and provide the necessary time</li> <li>450% increase in child care cost assistance; raising professional standards of child care</li> <li>Streamline Special Needs assessments; reinvest cost savings</li> <li>Mandatory education until age 18, either in school or work preparation</li> <li>Provide well-rounded education by including art, drama, and music</li> <li>Create turnaround teams of teachers and administrators to help struggling schools and school boards</li> <li>Allow parents to choose which public school is right for their children</li> <li>Treat teachers with the professional respect they deserve and turn the College of Teachers into a standards setting body comprised of working teachers</li> <li>Change "one-size-fits-all" funding formula to reflect community needs</li> <li>Ensure school boards are locally accountable while providing resources they need to adapt standards to their community</li> <li>Establish independent curriculum council to plan and prepare changes</li> </ul>

Economy	Commitments
	<ul style="list-style-type: none"> <li>Live by the balanced budget law, reduce the debt, freeze taxes</li> <li>Expand PSE capacity by 10% over five years, hire thousands of new faculty, attract 800 of the world's best teaching minds</li> <li>Freeze tuition for at least two years, increase graduate scholarships by 50%, increase OSAP flexibility to expand eligibility, loan amounts</li> <li>Offer pre-paid tuition at today's prices, waive tuition for neediest 10%</li> <li>Create employee training tax credit, double number of apprenticeships</li> <li>Increase minimum wage to \$8 over four years</li> <li>Create major new market by setting mandatory ethanol and biodiesel content rules for gasoline and diesel</li> <li>Maintain the low small business taxes that keep Ontario competitive</li> <li>Target infrastructure funding at the border to improve trade links</li> <li>Market post-secondary expertise to the world</li> <li>Enforce securities regulations to maintain investor confidence</li> </ul>

Health	Commitments
	<ul style="list-style-type: none"> <li>Pass Commitment to Medicare Act to make universal, public medicare the law; create independent Health Standards Council to track care</li> <li>Work with experts to set, meet maximum needs-based waiting times</li> <li>Deliver better care with at least 150 accessible family health teams across Ontario to avoid emergency room waits for minor injuries</li> <li>Strengthen health sciences centres with stable, multi-year funding</li> <li>Open 1,800 new hospital beds in the province</li> <li>Invest in homecare so the 115,000 Ontarians who must choose between no care and institutions can receive care in their homes</li> <li>Cancel the 15% nursing home fee increase, improve drug program</li> <li>Invest in community mental health agencies to improve services</li> <li>Increase medical school spots by 15% and number of family medicine training spots to ensure more family doctors in Ontario communities</li> <li>Remove barriers from qualified foreign-trained physicians</li> <li>Hire 8,000 more nurses and create positive, rewarding environment</li> <li>Help under-served communities attract and retain doctors</li> <li>Help kids stay healthy with mandatory daily physical activity in schools</li> <li>Enhance protection for Ontarians using non-traditional medicines</li> <li>Provide the Chief Medical Officer of Health with real independence</li> </ul>

Government	Commitments
	<ul style="list-style-type: none"> <li>Set fixed dates for provincial elections and introduce Internet voting</li> <li>Consult the public on whether or not to change the election system</li> <li>Create new lines of communication with the public e.g. Citizens' Juries</li> <li>Require cabinet ministers to attend Question Period, allow non-cabinet members freedom to criticize and vote against the government except on confidence motions and explicit campaign promises</li> <li>Require cabinet ministers to attend two-thirds of Question Periods</li> <li>Require public hearings on all major pieces of legislation</li> <li>Empower legislative committees to question government agencies</li> <li>Value the public service by supporting, recruiting the best &amp; brightest</li> <li>Allow public to set limits on fund-raising, spending by political parties</li> <li>Balance the budget and deliver it in the legislature where it belongs</li> <li>Ban self-promotional government advertising requiring approval for ads from the provincial auditor</li> <li>Increase the power of the provincial auditor by allowing access to the entire budget</li> <li>Require all new contracts signed with government to be subject to public scrutiny with legitimate confidentiality sections available to the provincial auditor</li> </ul>

Communities	Commitments
	<ul style="list-style-type: none"> <li>Shut down coal-burning power plants by 2007, require Ontario electricity suppliers to obtain at least 5% of their supply from clean, renewable sources by 2007 and 10% by 2010</li> <li>Help businesses and homes cut consumption by at least 5% by 2007</li> <li>Implement all recommendations in the Walkerton report, protect water from stream to tap by protecting lands surrounding sources, stop companies from freely raiding our previous water supplies</li> <li>Involve young people in preserving our environment through the new Environmental Youth Corps, creating summer jobs</li> <li>Protect Ontario's environment by prosecuting and fining polluters</li> <li>Divert 60% of waste from landfills within five years</li> <li>Increase supplies of affordable housing by 20,000, introduce housing allowance program to quickly and manageably get families into homes</li> <li>Provide protection for tenants by replacing the misnamed Tenant Protection Act and making unfair rent increases illegal</li> <li>Doubling investment in public transit by allocating 2 cents of provincial gas tax to municipalities</li> <li>Protect 1,000,000 new acres of greenspace, farmland on city outskirts creating a Golden Horseshoe green belt and curbing sprawl</li> <li>Create the Greater Toronto Transportation Authority with resources and power to create a seamless, effective GTA transit system</li> <li>Hire 1,000 more police, 50 more prosecutors, 100 new parole and probation officers</li> <li>Pass strong victim's rights legislation, make it easier to attend court</li> <li>Crack down on deadbeat dads, protect victims of domestic violence</li> <li>Purchase thermal imaging systems for firefighters to find victims in dense smoke and darkness</li> </ul>

Auto Insurance	Commitments
	<ul style="list-style-type: none"> <li>Immediately freeze rates, pass legislation requiring 10% cut, restructuring way insurance works to cover costs</li> <li>Work to control medical costs stemming from accidents, ensure insurers pass savings along to consumers</li> <li>Improve consumer protection, including an auto insurance watchdog</li> </ul>

## Engineering Organizations

## Semi with the Fishies

*Chris McCullough*  
2N Chemical

This past weekend if you wanted to travel to the exotic land of India, you needed only visit the Festival Room of South Campus Hall. This term's Semi-formal took a new direction with a theme of "Orient Express". To help make the venue look and feel the part the hall was dressed with flowing fabrics, candles and goldfish to give it a warm, intimate feel.

Eric from "Spin Doctor Productions" provided the perfect ambience for dinner with some jazz fusion. For those who came for the meal, they were treated to a tempting spread of chicken, soup, potatoes, veggies and buns followed by a pleasant fruit cake. After this relaxing repast, the music picked up just in time to get the party started.

The numbers steadily grew as the evening progressed and the dance floor provided the ideal way to burn off some of the energy provided by the fare consumed earlier. New and old music blended nicely ensuring everyone heard something they liked. The dance floor was full most of the evening showcasing the best (and worst) of the faculty of engineering's dance abilities.

In keeping with the theme, a number of people dressed in traditional Indian dress

and even displayed their traditional dancing techniques. A few brave souls were even enticed to try their hand at this new style of getting their groove on. In fact the news of this fantastic party travelled so fast that the Toolbearers caught wind of it and decided to make an appearance with their friend the Tool. Once everyone had a chance to have their picture with our beloved mascot, the semi directors capped off the event by awarding fish in some beautiful vases to a lucky few attendees. Many thanks to Sarah Sirega, Laura Mooney and Zubair Khan for putting on a fantastic evening.



*Some of those in attendance were absolutely captivated by the clever goldfish centre pieces.*



*The DJ from Spin Doctor Productions kept the night moving with a great selection.*



*A dapper outfit and drink in hand kept Daren Toppin the centre of attention*



*From left to right: Garret Smith, James Wood and Daren Toppin keeping the bar propped up and doing their part to support UW Bar Services.*

## Exam Writing Advice

*Edward Tan*  
2A Computer

As birds nesting signal the beginning of spring, nerds sleeping in lounges signal the beginning of exams. By now, many of your professors have probably gone through loads of practice questions for the midterm and has told you that you are all ready for the exams. However, after the results, he'll be very shocked at the results, but will assure you that the finals will be much easier.

I've been approached by many first year students who wanted to know what University exams were like. My response was "very hard", but it seems they always wanted a comparison to high school exams. Therefore, I've put together this specific analogy. Take all the exams you have ever completed in high school and put them into one big pile. Now, in the time span of three hours, shove them all up your ass. This is of course assuming that you are not writing one of those feel good, ego boosting exams.

The solution to successful exam writing is to adopt one of the three following study techniques. At the risk of sounding too technical, these methods are similar to the way that a computer operates. The first method is to store the information to the

hard drive. By studying on a daily basis way before the exams have started, you can permanently store all the information in your brain. Your last words on your deathbed would be from Euler's formula. The second method is to store all the information into RAM. This involves pulling many hours of straight studying without sleep, because as many of us know, if you sleep, the computer turns off and you lose all the information stored. Then after the exams you completely empty out your RAM with the aid of one or many drinking parties. The last method, also my preferred method, is the buffer. I store all the information in my brain, but as soon as I write it down, it's forgotten. The biggest advantage to this method is that most people second guess their answers after completing the exam and often change correct answers to incorrect ones. I never have this problem because I could never check my answers since I can't remember how I completed them in the first place.

So after all that has been said, you may wonder if I actually have any useful advice to give. As my anally insightful friends have mentioned, there is in fact only one thing you need to remember. As soon as you walk into the exam room, don't bother sitting down, just bend over the desk. If you're in Engineering, remember to bring a jar of Vaseline.





**Sandford Fleming Foundation**  
 E2 3322, ext 4008, sff@engmail  
 www.eng.uwaterloo.ca/~sff

**REMINDER**

**TECHNICAL SPEAKER COMPETITION**

The Faculty-Level Competition will take place on Thursday, October 16 at 10 a.m. in DWE 2534. The winner of the Faculty Competition will receive \$300 while all other participants receive \$50.

Refreshments will be served  
 Everyone is welcome  
 \*\*\*\*\*

**Student Travel Grants:** Available to students participating in technical conferences. Please check our web site for further information.

**Emergency Loan Funds:** SFF has made available funds for short-term emergency loans, interest free for 90 days. These loans are available to engineering undergraduates, on either an academic or work term. Contact the Student Awards office for further information.

**Ignite the Spark - Bridging the Gap Lecture Series**



In the first of this fall's Bridging the Gap lectures sponsored by the Engineering Society, the Dean of Engineering, and the Sandford Fleming Foundation, Dr. Howard Armitage talked to an audience of around thirty interested students about a unique innovation of the University of Waterloo.

The Master of Business, Entrepreneurship and Technology (MBET) program has been specifically designed to address Canada's pressing need for more successful innovators and stands out in North America as the only program of its kind.

Canada is, unfortunately, sitting dead last in the G7 countries when it comes to new businesses created and research expenditure in relation to GDP. However, with the University of Waterloo producing an incredible 22% of the university spin-off companies in Canada along with the new Research and Technology Park, Innovate Inc., and the entrepreneurial association on and near campus this was the idea place for such a development.

The MBET is a twelve-month, full cost-

recovery program that provides students with entrepreneurial-oriented skills in a practical, applicable, analytical, and goal-directed manner in a nurturing environment. Guided by an advisory council consisting of business leaders, innovation catalysts, and venture capitalists primarily from the local community, the program seeks to bridge the nefarious "knowing-doing gap" that students in MBA and other programs often suffer from.

Lecturing on constructing business plans and negotiating with prospective business leaders and venture capitalists, instead of being done in a vacuous environment, is provided as a core supplement to practical experience. By allowing students to take an idea from inception to implementation in front of those venture capitalists and business leaders in a way that constructive feedback is supplied solidifies the experience as a useful one.

Dr. Armitage also spoke of what he refers to as the fatal assumption of many technical entrepreneurs as well as of how the MBET program acts to ensure that its students avoid it. That is, technical individuals assume that if they understand the technical side of a business, they understand a business that does technical work.

By teaching the business side of entrepreneurship to MBET students, those who have the drive and talent to be entrepreneurs are not broken by that fatal assumption that claims so many ideas.

Of course, a career in entrepreneurship is not for everyone and neither, then, is the MBET. Designed to take around thirty to forty students, this intimate course of study requires dedicated applicants and an application process that ensures those who the program chooses are the right individuals to choose the program.

To learn more about the MBET and the Centre for Business, Entrepreneurship & Technology visit them on the web at <http://www.cbet.uwaterloo.ca> or contact Karen Gallant at [kgallant@uwaterloo.ca](mailto:kgallant@uwaterloo.ca) or (519) 888-4567 x7071.

The second Bridging the Gap lecture featured Peter Kappel, a UW Chemical Engineering Graduate and practicing lawyer, speaking about intellectual property rights and ownership on Tuesday, earlier this week and after the publication deadline for this issue.

Keep your eyes open for information on

the third and final lecture of this term's series taking place Tuesday, November 4th from 11:30 a.m. - 12:30 p.m. presumably in CPH 3385.

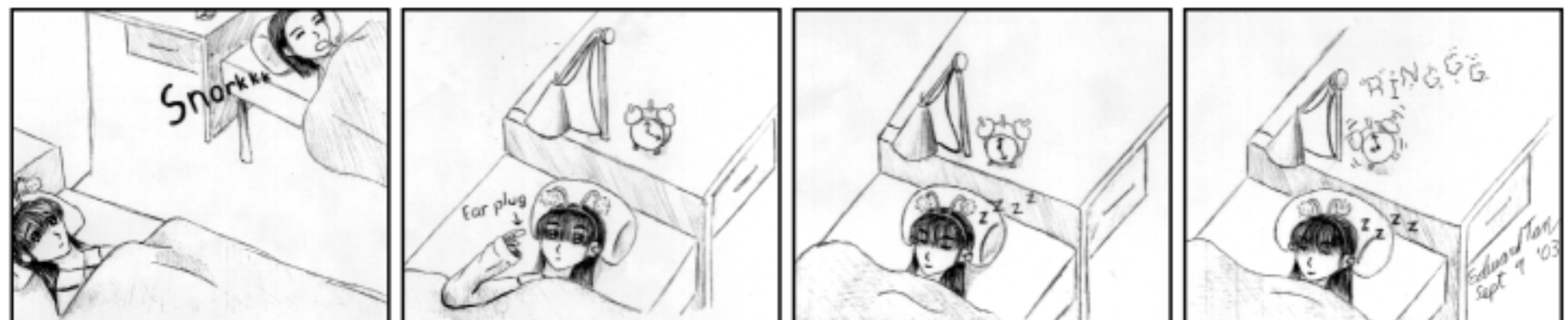
**Gearing Up We Need You!**

*Phoebe and Rahul*  
 Remembrance Day Directors

As we gear up for Remembrance Day and start making preparations, it was decided to aim for an all-UW Engineering student crew to put on the Engineering Society's Remembrance Day Ceremony. At present, we are actively seeking a trumpet player and a reader. Additions, such as choral groups, instrumentalists, personal stories/accounts/poems and veterans, would be phenomenal and much appreciated.

Please get in touch with Phoebe ([pnsu@engmail](mailto:pnsu@engmail)) or Rahul ([rnbhardw@engmail](mailto:rnbhardw@engmail)) if you are interested in being part of the ceremony or on the planning committee.

**Editor's Note:** The Iron Warrior welcomes articles and artistic pieces related to Remembrance Day in the next issue. The layout deadline is Friday, October 24th at midnight. Please contact us at [iwarrior@engmail](mailto:iwarrior@engmail) if you are interested.



## Columns

## Notable CECS Dates October 10 to November 3

Oct. 10: Chartered Accounting: Employer Interviews End

## Workshops:

\* Interview Skills: Selling Your Skills: Don't stop at the fundamentals; you must also prove your skills in the interview. Here is your opportunity to practice and improve. 2:30-4:30 (TC Room 1208)

Oct. 13: University Closed (Thanksgiving)

Oct. 14: Chartered Accounting: Ranking Forms available after 10AM and due back by 4PM

Architecture: POSTING AVAILABLE by 12 noon

## Teaching:

\* POSTING #1 AVAILABLE by 12 noon  
\* Hand in 1 copy resume package to CECS drop-off slot by 8PM

Oct. 15: Architecture and Teaching: POSTING #1 EXPIRES 8PM

### PROFESSIONAL & POST DEGREE DAY

Learn first hand from school representatives about post degree programs at colleges and universities in North America and around the world. 11AM - 2PM SLC

## Workshops:

\* Career Decision Making: Self-Assessment, Occupational Research, Information Interviews & Career Decision Making. After this session you will be in a better position to assess yourself and your "fit" in the world of work. 2:30-4:00 (TC Room 1208)

Oct. 16: Architecture and Teaching: POSTING #2 AVAILABLE by 12 noon

## Workshops:

\* Successfully Negotiating Job Offers: Increase the odds of getting what you want when negotiating salary and other details related to the job offer. 3:30-4:30 (TC Room 1208)

Oct. 17: Chartered Accounting: Match Results posted by 3PM

Architecture and Teaching: POSTING #2 EXPIRES 8PM

Oct. 20: Chartered Accounting: Meeting for Students Without Employment, 4:30PM

Oct. 22: Chartered Accounting: POSTING #1 (continuous phase) AVAILABLE by 12 noon

## Workshops:

\* Mastering the Personal Statement: Learn how to write a winning personal statement when applying to graduate and professional school programs. Presented by John Richardson. 2:00-3:30 (TC 2218)

\* Law School Bound?: Learn the best practices to prepare an effective law school application. Presented by John Richardson. 4:00-5:00 (TC 2218)

Oct. 23: Chartered Accounting: POSTING #1 (continuous phase) EXPIRES 8PM

## Workshops:

\* Job Search Strategies: Learn the "how to" of job/work search, networking, and employer research. Creative and tradition-

al methods are explored. 10:30-12:00 (TC Room 1208)

\* Letter Writing: Learn how to use letters to your advantage in the job search. 3:30-4:30 (TC Room 1208)

\* Resume Writing: Discover techniques for writing an effective resume. 4:30-5:30 (TC 1208)

Oct. 24: Employer Interviews End

Architecture: Interviews in Toronto Only Today

Oct. 27: Architecture and Teaching: Employer Interviews Begin

Oct. 28: Ranking Forms available after 10AM and due back by 4PM (Co-ordinator consultation ends at 4PM)

## Oct. 29: Workshops:

\* Interview Skills: The Basics: Learn the fundamentals of successful interviewing. 3:30-4:30 (TC Room 1208)

\* Interview Skills: Preparing For Questions: Discuss and learn from actual excerpts of actual interviews. 4:30-5:30 (TC Room 1208)

Oct. 30: POSTING# 1 (continuous phase) AVAILABLE by 12 noon

## Workshops:

\* Information Session: UofT Rotman School of Management: Find out about the Diploma in Investigative and Forensic Accounting Program and the Master of Management and Professional Accounting Program. 11:30am-1:30pm (TC 1208)

\* Writing CV's and Cover Letters: Are you interested in a career in academia or research? This workshop will show you how to prepare an effective curriculum vitae and cover letter when applying for positions in these areas. 12:00-1:30 (Room TBA)

\* Business Etiquette and Professionalism: Proper etiquette is crucial to a successful job search - and your career. This work-

shop will cover dining etiquette as well as appropriate behaviour at interviews, employer receptions/sessions, and other networking activities. 4:30-5:30 (TC Room 1208)

Oct. 31: Teaching: Ranking Forms available after 10AM and due back by 4PM.

Nov. 3: Job Match Results posted at 3PM

Meetings for Students Without Employment, 4:30PM (www.coop.uwaterloo.ca/students/impdates/8.html for info.)

Architecture: Ranking Forms available after 11AM and due back by 4PM

## Workshops:

\* Job Search Strategies: Special Session for International Students: International students will learn best approaches to search for work in Canada after graduation from UW (including visa requirements). 4:30 - 6:00 (TC 1208)

## University Eating II \$1.00 a day

Ryan Consell

3N Mechanical

Some time in everyone's university career, there will come a point of decision between using your last pennies on pleasure or food. This article is meant to alleviate some of that stress and lead you towards hedonism.

It may sound unfathomable in this day and age, but it is possible to live a somewhat healthy lifestyle on a one-dollar-a-day budget. There are a few key concepts that need to be applied for this to work.

First is the acquisition of free meals. For more information on this subject, please review the previous University Eating article published in the September 26th issue of the Iron Warrior.

Next is careful consideration of staple foods. Most people consider meat to be a pretty fundamental part of any diet. This should be reconsidered quickly - those vegetarians have something going for them. Meat is overly expensive. Even ground beef costs more than an

equivalent amount of cheese. So go with the cheese. Rice is good and cheap, but it tends to leave you hungry quickly, so scratch that too.

What you should look for in a staple food is high carbohydrate count. This leaves you with pasta, pasta, and pasta. There are various forms of pasta and sauce all of which are cheaper than a chocolate bar. It takes some time to get used to eating pasta every single day for one or two meals. This can be eased with the addition of spices (more on spices in a later issue).

Another important staple food that should be used to balance out one's diet is vitamin pills. These cheap little capsules of goodness are specially designed by scientists to quickly and easily deliver all sorts of wonderful nutrients to your body. These can make up for a large amount of expensive vegetable intake.

Our next section is on coffee. Coffee should be a major part of any starving student's diet. The caffeine found in coffee acts as a hunger suppressant while also helping to keep you awake. The sugar in coffee, which should be added in large quantities, has a very similar effect while also giving your body a quick hit of real energy.

Another useful beverage you will find is beer. Beer may be expensive but many people have a beer budget separate from their food budget. This leads to a wonderful opportunity. Instead of having a meal, have a Guinness. A good tall Guinness will give you all the nutritional goodness found in a sandwich except for the fiber. This means you just enjoyed a beer and a night out, without encroaching on your food budget.

Our final topic is on breakfast. Breakfast for the starving student is a luxury; skip it. Instead drink a cup of coffee. Adjust your sleeping patterns so that you don't really have time for breakfast. You should go to bed when you start to get hungry and wake up just in time to get to class with a coffee in your hand.

In closing we leave you with a suggested list of items for a \$1/day shopping and their relative cost/meal portion:

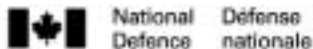
Vitamin Pills - \$0.07  
Mr. Noodles - \$0.25  
Cabbage - \$0.16  
Somen Noodles - \$0.41  
Knorr Soup stock - \$0.25  
Coffee - \$0.10  
Sugar - \$0.03  
Pasta - \$0.18  
Pasta Sauce - \$0.37  
Bread - \$0.08  
Bologne - \$0.08

Mutant Dog Plays Baseball



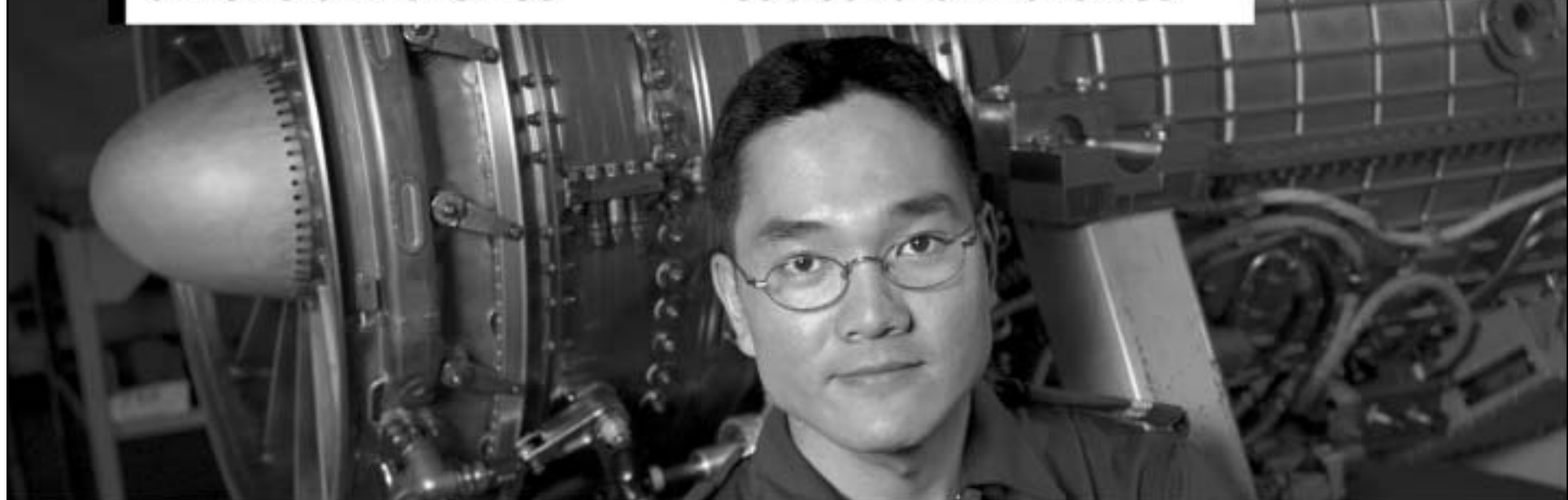
http://mutantdog.dyndns.org

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## Waterloo Through My Eyes Making My Voice Heard

*Christine McCullough*  
2N Chemical

I slept in on Thursday October 2. I had a lab that morning but I was feeling like crap. There are a lot of germs flying around these days. I stayed in bed for far too long, ah, but did it feel good. Then at five o'clock when I finally got showered and ready to face the day, I realized it was Election Day. Ah geez, I didn't even know where I was supposed to go and I had to dig out an old credit card bill as a proof that I live in Waterloo. Honestly, I just felt much too tired for the whole thing. Then that little voice in my head started. "There are a lot of people in Waterloo Chris, your one vote won't matter." "You're not feeling well, you'd be better off to just stay in." "Doesn't your bed look cozy? Why don't you see if it feels as good as it looks?" It's the same voice that tells me I have ten more minutes in the morning or that I really can handle another drink. Yeah, I listen to that voice too often, but this time I put my foot down. I rooted through my papers to find that credit card bill, grabbed my jacket and, in my grubby old sweatpants, I headed to the polls.

There wasn't a line when I got there, which I was glad about, but there was a form I had to fill out. It wasn't too big of

a deal: address, date of birth, gender, the normal stuff. Once I had scratched my signature on the form I handed it to one of the Elections Ontario workers. "You're from Brantford eh? What, you didn't have time to go home to vote? Well, I guess you can vote here." Whoa, back that train up lady. It is my right to vote here, and no, I didn't have time to get home to Brantford today, I was in bed all day catching up on some sleep. As a matter of fact I want to

***"...by voting I earned an undeniable Canadian right, the right to complain."***

vote here! I live here, and the MPP from this riding is going to have a greater effect on me than the MPP from Brantford. Besides, I don't think anyone chooses to go to Brantford unless it is absolutely necessary, but that's a whole other issue... Okay, I didn't say any of that to her, kind of wish I did; instead, I just gave her a snarky grin and went to the appointed polling station. The lady there was much nicer. She smiled and gave me clear instructions: "Only mark in one box and show me that the initials on the back are still there before you put your ballot in the box". Damn, that means I couldn't use all those un-initialed ballots I had hidden in my jacket. Oh well, I guess I won't be Kitchener-Waterloo's MPP this term. So, I went behind that very secretive little cardboard voting station and put an 'X' beside the candidate I liked best. I made my 'X' really dark with extra emphasis. I wasn't just voting for this guy, I was incontrovertibly voting for this guy.

I took my ballot, folded it back up, showed the smiley lady at the polling station that the initials were still there and deposited it into the very secure cardboard collection box.

As I left, I felt a sense of civic pride. I did the right thing. I voted. And not only that, I voted for the best candidate. I was sure that my vote could put him over the top and make him Waterloo's next MPP. Ah, I had done my good deed for the day.

Well, turns out my candidate didn't win, but you probably knew that since I kept referring to "him" and Elizabeth Witmer was the winner. I was a bit disappointed, but I realized something: I voted for a specific leader, with a specific platform and specific beliefs. Beliefs that I share and are important to me. I made my voice heard regarding how I want this province run, even if the candidate I voted for didn't win. But most importantly, by voting I earned an undeniable Canadian right, the right to complain. If I had decided that sleeping was in fact more important to me than voting, I would have no right to complain about how our MPP is dealing with things. But I did vote and not for Elizabeth, so the next time she pulls something sneaky like trying to squeeze me for more tuition money, don't you worry, I will make my voice heard, I will do what every good Canadian does and complain. But more importantly, in four more years, if Lizzy isn't representing my interests, I will make my voice heard again, and I will vote.

## No Adequate Proof Against Same-Sex Marriages

*...continued from Page 9.*

morally grave error and he's not being accountable to God." Hearing statements like this that threaten the PM with eternal damnation shows the weakness, and irrationality in the arguments given by the anti same sex marriage side.

There is no adequate proof that giving homosexuals the right to marriage will irreversibly send society decaying into oblivion, contrary to some overzealous, fanatical anti same sex marriage groups. By giving homosexuals the right to marry is the next step in developing society for the better. We as the people of Canada strive to be a country that is objective and instead of being subjective based on appearance, origin, or economic class. Isn't giving the right to marry to homosexuals a fair and equal thing to do? If we don't, we end up being hypocrites of our own creed, and we are not better a country than a country that jails homosexuals for who they are. The government has the duty to permit any of its citizens to live in a peaceful, free lifestyle with equal human rights as any other citizen regardless of who they are or where they are from. If you don't agree with this, the I suggest you move elsewhere, as the wheels on the Technicolor Train are moving and gaining speed towards equality

## Columns

## Sci Fidelity

## Part 2 of My Adventures in an English Class

Stephanie Purnell  
4A Chemical

I've now had a couple more Tuesday night English classes. I feel like I'm starting to get the hang of it. The reading isn't the hard part of this course—it feels like I'm sneaking in some relaxation time when I'm actually doing homework! Madness! The hard part is shifting from engineering class mode to English class mode—the structure is entirely different, and the equations aren't put on the board for you in black and white. Everyone should take an English course—there are many reasons, not the least of which, it keeps you fresh (and it's fun!). And so, without further ado, on to the books!

To recap from last week, the main ideas used in this class to analyze works of SF are as follows: The SF novum, the notion of difference, and the nostalgia used by every SF author to familiarize the reader with the unknown. It's good to keep those concepts in mind when reviewing a work of SF. This week, I am finishing off the Foundation Trilogy, with a particular emphasis on The Second Foundation. If anyone hasn't read the Foundation Trilogy—and means to someday—a “caveat emptor” warning to you—there may be spoilers betwixt these lines.

The Second Foundation is the continuation of Foundation and Empire. The two Foundations represent the two opposing ends of the scientific spectrum—the physical and the psychological. The physical scientists comprise the First Foundation and have built their technological superiority over all worlds in the Galaxy. The Second Foundation is a group in secret, a Foundation of psychologists, capable of

mind manipulation of other, lesser humans. This book explores the conflict between the two factions of Hari Seldon's psycho-historical plan.

There are two parts to Second Foundation—the fall of the Mule to the Second Foundation and the struggle between the First and Second Foundations. The shift in attitude between the two parts is palpable. It starts with the focus of “difference” between humans and the mutant Mule. The Second Foundation is a barrier between the First Foundation and all of humanity and the Mule's mutant mind-control powers. Here, the reader wants the Second Foundation to save the day, and they do. But at what cost? In the second part of the book, the First Foundation, under the leadership of Dr. Darell, becomes leery of control by the Second Foundation and tries to find ways to eliminate it. In the end, the resolution is not a resolution at all, but an uneasy balance struck between the two sides. Asimov does not make either side the “right” side, and leaves the reader with the feeling that the only thing that was decided was that the novum of the Plan continues.

Isaac Asimov was born in Russia in 1920 and moved to the United States when he was three years old. Asimov did not know Russian and so the only available Marxist writing was so-called “Vulgar Marxist” theory. The ideals of a caste-ordered society and the pre-determined destiny of society are easily seen in the Foundation series. Throughout the series, Hari Seldon's Plan for the Galaxy does not change. The ultimate goal is a society ruled by a superior class—the psychologists of the Second Foundation. They have a higher understanding of the nature of humanity, and as such are the perfect

leaders for the new Empire. And no one but the Second Foundation knows the real purpose of the Plan. The First Foundation can be paralleled to the American culture Asimov was raised in, and he is not entirely supportive of the democratic way. Should the ruling of a people be put in the hands of the people, when they don't know what's best for them? The undercurrent of disdain for democratic society shows through in the characters of the First Foundation and their inability to help themselves. They are led entirely by the Seldon Plan, social forces, the Mule and the Second Foundation.

The Plan is constant throughout the series; the changes that are significant are the reactions of the regular First Foundation characters to this Plan. Salvor Hardin, the first mayor of the First Foundation, was a decisive man. In each crisis situation, he would wait until he had no options and then took fast action. He trusted Seldon, but knew he had to take control of each situation. No wars were won against the Foundation. Hober Mallow, the Merchant Prince, traded with technologically inferior kingdoms to build an economic empire, ignoring Seldon completely. The Foundation remained unbeatable. Then, as the Foundation became seemingly invincible, the government became static and ruled by succession. The Plan became a safety blanket and into this overconfident security came the Mule. Suddenly the Foundation was the underdog, and the faith in the Plan was shattered as they were defeated. Behind the scenes, the Second Foundation was working furiously to put the Plan back on track. The First Foundationers, lead by Dr. Darell, saw the Second Foundation as a threat (their powers were similar to the Mule). By removing the agents of the Second Foundation,

the original Foundation could get back on track, and continue their reign. I'll not ruin everything by continuing. Suffice it to say, for me the interesting part of this series was the behaviour of the characters when faced with an inevitable destiny, and how, even when faced with overwhelming contrary evidence, humanity wants to have things its own way.

Next time, I'll be talking about that literary monolith, Dune. Stay tuned!

## Newest Volunteer

James Schofield is the newest addition to a growing list of engineering students who are contributing to the Engineering C&D not as paying customers, but as volunteer employees. Not only are these volunteers helping keep the student-owned business in the black, but they are also earning valuable P\*\*5 points for their classes. For more information on how to volunteer yourself, e-mail Mary at [mbland@engmail.uwaterloo.ca](mailto:mbland@engmail.uwaterloo.ca)



James Schofield, cheerfully filling his first shift at the C&D

## the Iron Inquisition

Kiran Dhaliwal, 2B Electrical

### Why vote?



“If you pay the taxes, why not?”  
Tilak Jayram - 1A Electrical



“For the illusion that we matter.”  
Patrick Chan - 2A Civil



“If voting changed anything they'd make it illegal”  
Kevin Cedrone - 1A Mechanical



“Because women are allowed to vote now I hear.”  
Jessica Rocca - 4A Chemical



“In order to have a say.”  
Paula Calderon - 1A Electrical



“Too busy drinking.”  
Tim Law - 4N Computer



“It's against my religion to.”  
Bryan Bell-Smith - 4N Computer



“I'm not old enough to vote anyway, so I'll worry about it next time.”  
Ann-Marie Winkler - 1A Mechanical