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THE IRON WARRIOR

THE NEWSPAPER OF THE UNIVERSITY OF WATERLOO ENGINEERING SOCIETY

VOLUME 28 ISSUE 3 | WEDNESDAY, FEBRUARY 28, 2007



China puts on a
show of arms
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FEDS Co-op Student
Council meets
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Ottawa Hosts UW 50th Anniversary Celebration



BAHMAN HADJI
SENIOR OTTAWA
CORRESPONDENT

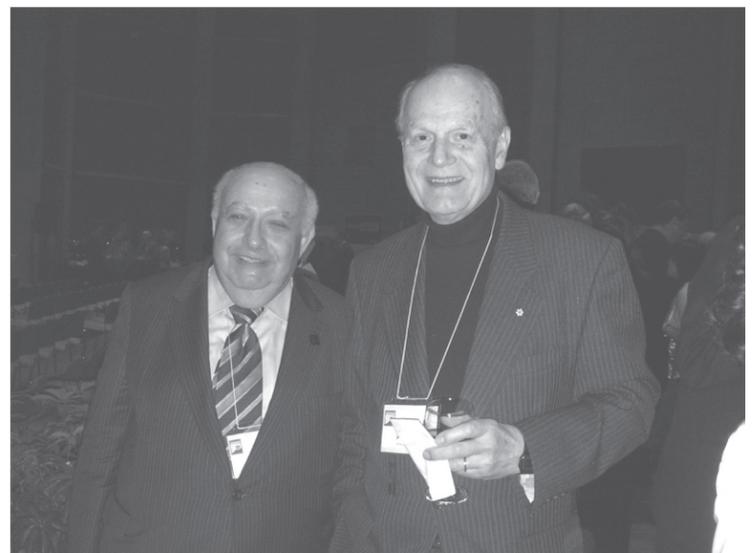
On Monday, February 19th, the University of Waterloo held a special alumni event at the National Gallery of Canada in Ottawa as part of its on-going 50th anniversary celebration. The event was attended by staff as well as alumni, co-op students, and co-op employers in the Ottawa area. Speakers included President David Johnston, Co-operative Education & Career Services Executive Director Peggy Jarvie, and Waterloo alumnus and Kitchener-Waterloo Member of Parliament Andrew Telegdi. Dean of Engineering

Adel Sedra was among the staff present, along with Ottawa CECS Field Co-ordinators Steve Barr and Ed Papazian.

Upon arriving, guests were presented with name tags and given a chance to walk around and meet some of the other bright minds who have been a part of UW over the last 50 years. For current students on co-op, it was a thrill getting the chance to meet and talk to past faces such as Paul Koch, one of the first graduates of Waterloo Engineering (Chemical '63), one of the co-founders of the University of Waterloo Engineering Society, and the very first President of the Engineering Society 'B-Term' (1958-59), as it was known back then.

After the guests were seated, President David Johnston took the podium and,

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Dean Sedra and Tom Brzustowski, former UW Provost (1975-87) and Mechanical Engineering Professor (1962-87), now with the University of Ottawa School of Management

Declining Enrollment of Women in Engineering



ALICIA LIU
4B COMPUTER

The problem:

A commonly heard complaint in the halls of Engineering is the lack of women in this faculty. Unsurprisingly, the data backs up what has become a running joke. Data from the Women In Engineering Committee show that the percentage of women entering Waterloo Engineering are only around 15% and have been on a decline since it last peaked 5 years ago. This is a Canada wide trend according to the Canadian Council of Professional Engineers (CCPE), which shows an increase in enrollment of women up until 2000, after which enrollment levelled off and started to decline.

A more disconcerting statistic from CCPE is that only 9% of practicing professional engineers in Canada are women, and in Ontario, that number drops to only 5%, according to Ontario's Ministry of Education.

But is this a problem?

Occasionally I hear remarks made by male classmates and friends who do not think having such a low percentage of women in engineering is a problem. After all, if girls don't want to pursue engineering, why spend all this effort to attract them?

The fault with this kind of logic is that it overlooks the fact that engineering is unnecessarily unattractive towards

women. By creating a culture that doesn't welcome women robs the engineering profession of highly talented and intelligent people, who could otherwise have made great contributions, by looking at and solving problems in a different way.

Furthermore, if engineering is not appealing to women, this is indicative that some men are being pushed away too. In the long term, this could mean a general decline in the engineering profession. The women tend to be the first to go, which makes it all the more important to attract and retain them.

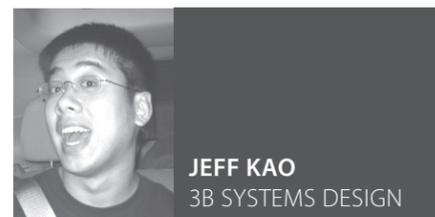
So why is this happening?

There are many reasons why girls are not pursuing engineering. Family, culture, society all play a large role, notes Christine Moresoli, a chemical engineering professor at Waterloo and co-chair of Women in Engineering. I won't go into a wide discussion about differences between men and women and male and female roles in society, but instead will touch upon a few directly relevant points. Engineering is still seen as a very male-oriented profession, building bridges, tinkering with circuits, working with cars. One major problem, I think, is that girls are not exposed to the fact that engineering isn't limited to these decades-old stereotypes, but rather a very rich profession that can open many doors in business and industry.

Compounding the problem is that because of the lack of women currently in engineering, girls have very few role models and potential mentors, who can point them to this career path. I know many if not most engineering girls I know all

See "Bringing", Page 4

Behind the Scenes: JobMine Shutdown



JEFF KAO
3B SYSTEMS DESIGN

These days, having recently dealt with the stress of midterms and co-op interviews, the JobMine shutdown may only seem like a distant memory. But at the time, it probably seemed like the end of the world for co-op job seekers. I, for one, welcomed the extra time to fix up my resume, but I eventually realized how difficult this was to do without knowing what the jobs were!

On January 19th, JobMine experienced a shutdown that was first thought to be temporary. But instead, the problem turned out to last for several days. Students were left wondering why this was, or whether CECS was even doing anything to help solve the problem! Even the current wikipedia entry for JobMine recounts the "consternation and confusion" experienced during the shutdown.

After all the stress and confusion, students certainly have a right to understand what happened. Fortunately, upon some inquiry, CECS and the Information Systems & Technology (IST) staff working on fixing the shutdown were kind enough to provide their insight into the situation. Mr. Olaf Naese is the Communications & Public Relations administrator of CECS at the University of Waterloo, and Mr. Dave Kibble, himself a former UW engineering student, is one of the directors of information systems at IST.

Did the shutdown impact co-op interviews?

Mr. Naese stated that we were fortunate that the JobMine shutdown occurred when it did. Even though it was during the busiest period for co-op job applications, the solution was found early enough to give enough time prior to the beginning of interviews. As a result, only a few employers moved their interview date so as to allow themselves more time to review applicants.

Are there concerns of the impact on UW co-op's reputation?

A system problem of this magnitude has never happened before.

Upon asking whether this event has negatively impacted the reputation of Waterloo's co-op system, Mr. Naese assured that no complaints were received from employers, and very few were received from Waterloo co-ops. He went on to say that the recovery time was relatively fast, and that a system problem of this magnitude has never happened before.

Was there any data loss associated with the shutdown?

Mr. Kibble was confident that no data loss had occurred. In addition to the hardware issues having only affected a small

See "JobMine", Page 8

Iron Editorial: How to Complete Your Education



**HAROUT
MANOUGIAN**
EDITOR-IN-CHIEF

It is no secret that students at the University of Waterloo are arguably the most qualified in the country. The pairing of theoretical knowledge gained in the classroom with the practical experience of working in industry provides a degree of focus and understanding that other Canadian universities cannot compete with. What not all students are aware of, however, is the third ingredient, without which no education is truly complete.

You can probably remember (unless you are in 4B and still recovering from IRS) the first thing UW Engineering sent you after you applied in your senior year of high school. They already had your marks but were looking for more. After all, most of the applicants were at the top of their class, making it difficult to differentiate individuals with only a transcript. Thus, they sent you an Admission Information Form to give you the opportunity to really tell the Admissions Department what you have to offer UW.

The third secret ingredient to a complete education is difficult to convey with a single word. Some would describe it as a personal drive, an innate source of self-motivation. Did you ever read a book not covered in an English course? It could also be labeled as ambition or the desire to achieve a goal to single you out from the crowd. Did you train to win the championship in your sport of choice? It is also embodied in the rejection of limitations and the necessary creativity to overcome them. Did you analyze problems and search for a solution instead of just complaining? In his "General Theory of Employment, Interest and Money", John Maynard Keynes called it "animal spirit... a spontaneous urge to action rather than inaction." He claimed that without this factor being exercised in individuals, mankind as a whole would not have achieved the power over nature that it exercises today, also known as engineering.

Upon entering our first year at Canada's largest engineering faculty, we all possessed this virtue to varying degrees. Immediately, the university stepped in to

develop the trait in all of us. How many times did you hear "You need to maintain a balance. You can not study all the time."? The truth is, outside the lecture halls, a different genre of classes are taking place all the time. They do not have syllabi or exams; neither do they cost a penny to take. The main topics covered are leadership, teamwork, satisfaction from accomplishment, and making a difference. You can sign up by dropping by the Midnight Sun Solar Car office, UWAFI garage, or EWB Discussion without Borders. You can nominate yourself to run for an EngSoc Executive position, apply for a directorship, sign up for the Engineering Jazz Band, join the staff of the

wheelchairs to play basketball with, mentors for high school-aged shadows, a student voice in university administration, and a newspaper in your hand.

Sometimes the University of Waterloo is portrayed as a campus with a lack of student life. Have these critics seen the list of EngSoc Directors? Have they ever asked for a Resume Critique? Were they at the CFES Congress where we had twice as many delegates as any other school due to our twin societies?

Engineering students at UW have enough student life to spare. And they do. Every term, groups of students spread the wealth throughout the globe by academic exchanges, international work terms, or



Brian Langelier and Brock Watson in front of the Sydney Opera House. These two third year Mechanical students are currently taking a work term off to tour Australia.

Iron Warrior, or tell girls in Grades 7 and 8 how cool engineering is. Of course, it is not too late to contact a varsity coach to find out when the tryouts are for next year or gather interest to sign up an intramural team. It is through these extracurricular activities that you will fine tune that secret, elusive character trait.

The good news is that you already are! It is thanks to motivated, creative students like you who volunteer their time and effort that our solar car has completed a tour of North America, our campus is home to an undergraduate-run microchip design and research group, the UW ASIC Design Team, and we are able to pull a bus into Kitchener. You ensure there are movies in POETS, semi formals to attend,

even just to backpack through a new continent. From Yellowknife to Vancouver, Silicon Valley to New York, England, France, Germany, Sweden, Switzerland, Armenia, Tanzania, Zambia, India, China, Vietnam, Australia, and Japan, you name it, a UW student has been there.

These experiences offer something that is not available in the basement of RCH. The personal satisfaction that a major accomplishment brings develops a call to action which is the driving force behind all engineering. Make sure that, before you graduate, your education is complete. Make sure it becomes the driving force behind you.

the IRON WARRIOR

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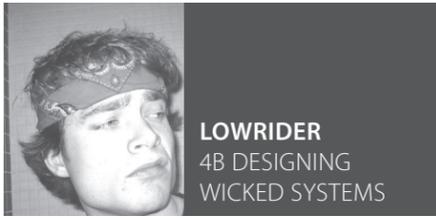
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The Iron Warrior encourages submissions from students, faculty and members of the university community. Submissions should reflect the concerns and intellectual standards of the university in general. The author's name and phone number should be included. All submissions, unless otherwise stated, become the property of The Iron Warrior, which reserves the right to refuse publication of material which it deems unsuitable. The Iron Warrior also reserves the right to edit grammar, spelling and text that do not meet university standards. Authors will be notified of any major changes that may be required.

Mail should be addressed to The Iron Warrior, Engineering Society, CPH 1327, University of Waterloo, Waterloo, Ontario, N2L 3G1. Our phone number is (519) 888-4567 x32693. Our fax number is (519) 725-4872. E-mail can be sent to iwarrior@engmail.uwaterloo.ca

Weight of Left Hand > Weight of Right Hand



Dear LowRider,
What should I read during Reading Week if the next LowRider article hasn't been sent in yet? ARRRR...

HM

Dear Ed,
I appreciate the reminder. But wait... Isn't reading week over already? You're not wearing an eye patch so lose the ARGH pirate.

LR

Dear LowRider,
WOW! I woke up today only to find a notched, slice of stainless steel pipe on my finger. My body is bruised and beaten and I can barely talk. Quite possibly the best day of my life. Most definitely the best five years of my life. Just thought you should know.

Ringed

Dear My Fellow in Fourth,
It is a very special moment I must say. I've never worn any jewelry my entire life. My left hand looks so elegant in comparison to my right. When conversing with others, I often find myself staring at my steel shrouded pinky and drift off into the land of the yellow submarine. We've worked our asses off to get here. And only now does the fun begin.

I don't think this novelty will wear off.

Wedded to cold iron,

LR

Dear LowRider,
My stupid roommate keeps writing about me in the newspaper! It's so annoying man. None of it is true. I'm barely Italian for goodness sakes. I keep threatening that I'm going to write you a naughty letter to bash on him so here it is. I might even threaten him with my grandfather's custom engraved steak knives and poke him trough the wall. My pinky is purple!

Michelangelo Donatello Raphael Leonardo

Dear TMNT,
I wish I drove a tank that shot deep dish pizza pies and was dating a hot red head reporter. Splinter and Shredder are my home boys. Keep up the good work.

Dear LowRider,
My stupid brother keeps bashing his ring off my head. My forehead is all bloody and bruised. As he walks around the house wearing nothing but his ring he taps everything metal in sight. The ting ting ting is driving me nutsy! What can I do?

2 Something Little Brother

Dear Junior,
I'll always be stronger, smarter and better looking than you. Wear a helmet.

LR

Dear LoweredWriter,
I'm so sick of your stupid articles. All you ever do is write such garbage about yourself. Maybe instead of LowRider you should rename the column FirstNameLastName. You know use naming methods like in C++ and stuff. If I only knew your actual first and last names. You're so secretive you sly bastard. You're grammar also sucks a lot.

Dear Well_Written_Mathie,
Shut_Your_Fat_Canker_Infected_Mouth_And_Go_Make_Love_To_Your_Ipod;

%% How's my syntax?
End ForLoop IfStatement Exit Shit
P.S. Come find me so I can bang my ring off your head

Dear LowRider,
I'm so enamored with you. Will you join hands with me and go skating sometime perhaps maybe yes?
Clairborne

Dear Liz,
I can't skate. But I can dance the skate dance.

LR

Dear LowRider,
ATTN: URGENT DEAR FRIEND
HIGHLY CONFIDENTIAL PLEASE.



I am the head of Accounts and Audit Department of Bank Of Africa, Ouagadougou. It is my utmost pleasure to send you this confidential message. In my search for a reliable business partner overseas, i got your contact in the internet and was impressed with your profile hence my interest in doing business with you. In my department we discovered an abandoned sum of \$18.3m US dollars (Eighteen million, three hundred thousand US dollars). In an account that belongs to one of our

foreign customer who died along with his entire family on Monday, 31 May, 2000 in a plane crash outside Paris.

LOVE,
DR.MUSTAPHA ALI

Dear Doc,
I'm sorry to hear that your aunt's grandma's sister's mother-in-law's monkey wants to pay me \$18.3 million. I only accept paypal. Sorry.

LR
'till next time kids, keep it low.



Have a problem? Need advice?
Email LowRider at uw_lowrider@hotmail.com

China Shoots Down Satellite

DAVID YIP
4B MECHANICAL

Last month, Aviation Week reported that US intelligence believed that China destroyed one of its own orbiting satellites in a weapons test. China did not confirm the shootdown until 12 days later, leaving the international community to puzzle over the rationale over the unannounced test. The satellite was an old weather satellite, destroyed using a ballistic missile carrying a kinetic kill vehicle.

Political analysts have suggested two main explanations for the test. Beyond the obvious technical design validation, the first is that it is an attempt by China to bring the US to the bargaining table to negotiate an international treaty that would limit the militarization of space. China and Russia have been ardent supporters of such a treaty, although the United States has been dismissive. In August last year President Bush authorized a US National Space Policy stressing "freedom of action in space." The existing Outer Space Treaty, effective 1967, merely prohibits the placement of "nuclear weapons or other weapons of mass destruction" in space.

The second political explanation is a

simple show of force, to demonstrate to themselves and the world, specifically the US (the dominant power in space) that China has the capability to destroy satellites. Since American military capability is heavily tied to satellite communications, navigation, and imaging, this is no minor threat. However, the satellite destroyed was in low-orbit, the habitat of imaging satellites, whereas communications and navigation satellites are higher up.

Research on anti-satellite weapons began in the 1950s during the Cold War, with air launched weapons. Initial attempts were discouraging as the guidance technology at the time was inadequate, leading to nuclear anti-satellite weapons. However, this "overkill" method had many drawbacks, including the disabling or destruction of "bystander" satellites through EMP (Electromagnetic Pulse) or the blast itself. Some ground-based electronics were also damaged by the EMP. Nuclear blasts in orbit also created residual clouds of radiation which crippled or disabled other satellites even after the blast occurred. Major American anti-satellite efforts stopped in 1963, though smaller projects continued until the 1970s. The Soviet Union continued work and deployed an anti-satellite

program, albeit a troubled one in 1976. American work on anti-satellite weapons began anew in 1977. Eight years of work culminated in a missile designated ASM-135 being successfully tested against a research satellite in 1985. The missile was fired from a steeply-climbing F-15 Eagle as a launch platform.

Contemporary work has been focused on the use of ground-based systems using directed energy - "lasers" - to either blind or destroy satellites in orbit. James Oberg writes in the IEEE Spectrum (January 2007) that possible defensive measures against anti-satellite weapons include lowering of radar or optical reflectivity, or perhaps using a decoy. In 2001 Space Daily reported that China was developing a "parasitic satellite" concept that would latch onto to interfere with or destroy the enemy satellite, although the system tested recently was not of this type.

The ASM-135 was a three-stage system. The first stage was a rocket motor designed by Boeing, whereas the rest of the missile was designed by LTV Aerospace. The second stage carried inertial guidance systems, and the final stage carried a kinetic kill vehicle, with its own infrared guidance system and maneuvering jets. The "kinet-

ic" refers to its use of kinetic energy (i.e., impact) to destroy the target, rather than explosives. Since 1985 no one has destroyed any satellites, in part because the Soviets and Americans had realized that fast-moving debris from destroyed enemy satellites would endanger their own satellites, and the American air-launched ASAT program ended in 1988. The recent Chinese test is estimated by the Union of Concerned Scientists to have created at least 2 million pieces of debris, along with 40,000 particles between 1 and 10 centimetres, and around 800 pieces 10 centimetres or larger. This debris can reach speeds of 7500 m/s (or 27000 km/hr). The debris does not pose an immediate danger to commercial imaging satellites, but the International Space Station is still at risk, according to Reuters.

While the Chinese have explicitly stated "China has always advocated the peaceful use of space, opposes the weaponization of space and an arms race in space," critics worry that the test may regardless encourage development of space arms, especially in countries such as the US and India, both with vocal proponents of space weapons.

Bringing Engineering to Women

Continued from Page 1

have a parent or two who studied engineering. This is the case for me as well. Truth be told, I probably wouldn't have pursued engineering if that weren't the case.

Women engineers are not all over TV and other media, unlike the attractive doctors and lawyers we see every day. Imagine if one of the Sex and the City characters was an engineer? This can be attributed to the public image that engineering has, which doesn't hold the glamour or prestige of some other professions. Girls need to be shown that engineering can be a creative and inventive field.

I think most importantly, girls should be acclimatized to engineering related activities as early as possible, a belief shared by Professor Moresoli. High school is already too late. There were only four girls in my

OAC physics class, which is a prerequisite for engineering, and of those, I was the only one to go on to study engineering. In many traditional households, oftentimes girls are not raised to be career-oriented, and therefore may prematurely reject what are perceived to be harder subjects like advanced mathematics and physics, stunting any possible foray into engineering.

What can we do about this?

So what is the University of Waterloo doing to mitigate this problem? The Women in Engineering (WIE) Committee was established in 1991 at the request of the Dean of Engineering to "give women of all ages the opportunity to choose engineering as a career".

To this end, Waterloo is a participant of Go Eng Girl!, a cross-university program which started 2 years ago, to acquaint young girls in grades 7 and 8 and their

parents with engineering, through accomplished women engineer speakers and hands-on engineering activities.

I myself participated in this event as a volunteer last year. I was a bit disappointed by the mixed responses I received from the girls when I asked them if they would consider applying to engineering when it came time to choose a university program. Most expressed that they wanted other careers, notably in health/medicine. One girl particularly enthused about engineering had made up her mind long before coming to Go Eng Girl. However, I was heartened by one girl who, after having been dragged to the event by her parents, did change her mind and now is considering engineering.

So there is hope. Carnegie Mellon University implemented a high school outreach program and changed its admission requirements to rely more on general

math and science background rather than specific programming experience to boost female enrollment in its Computer Science program to the highest in North America.

The effectiveness of Go Eng Girl remains to be seen in another few years when these girls start applying to university.

As a woman and a computer engineering student, which is the discipline with the lowest enrollment of women, percentage-wise consistently in the single digits, I am acutely aware of the lack of women. I encourage other students to volunteer for outreach programs, and actively show young girls that this is a viable career path, in which they can benefit society and themselves. Who knows, with more women, maybe one day engineering will become glamorous enough to have its own hit TV drama! Grey's Tool, anyone?

An Update on Recent Happenings With FedS

JEFFREY AHO
2B MECHATRONICS

After a busy two-week campaigning period, FedS has a new Executive Council-elect. Despite a strong push from Presidential candidates Adam Schubert from engineering and Michelle Zakrison the outgoing FedS president, Kevin Royal, current ASU president and Don, succeeded in his second run to lead the Federation of Students. In the next year, Royal hopes to focus on communication, and hopes to decentralize FedS, with the goal of increasing involvement from the engineering faculty.

The other winners of this year's race were Del Pereira for Vice-President Administration and Finance, who's campaign promises included increasing the number of people at the Bomber and catering the Society C&Ds; Darcy Higgins for Vice-President Internal, who's campaign promises included creating a Services Director and working towards a more sustainable campus; and Jonah Levine

for Vice-President Education, who campaigned strongly on fixing the tuition inequity for students in engineering taking non-engineering courses.

In engineering, Spencer McEwan was acclaimed as the new engineering senator for the 2007-2009 term. On the council side, Jeffrey Aho, Michael Sue-Kam-Ling, and Kristi Herlein were acclaimed as engineering councillors for the 2007-2008 term. Renjie Butalid, current VP Admin-Finance, was elected as Senator-at-Large. The engineering constituency recently added Levi McCulloch, Shruti Satsangi, and Kristi Herlein as engineering councillors for the remainder of the 2006-2007 term.

Now that President Zakrison has returned to work after taking a leave for the campaign period, a little pressure has been taken off of Renjie Butalid and the VP Education, Jeff Henry, who were covering four portfolios after the sudden resignation of the Vice President Internal, Sai Kit Lo. Mr. Lo resigned on principle after a decision by the FedS Board of Directors

to overrule Mr. Lo and allow the Vagina Monologues to be held in the SLC Great Hall. Mr. Lo cited what he believed to be a possible violation of Policy 33 and the Ontario Human Rights Code despite the advice of the FedS lawyer. A motion to censure the former Vice-President Internal failed, 9 for, 11 against, at the February students council meeting.

A few issues will be coming up at FedS in the near future. After a failed council motion, and a campus-wide petition, the FedS Board of Directors will call a referendum in the next month on the topic of a non-refundable universal bus pass. While the details are still up to the board to decide, it is expected to cost around \$41.67, and will possibly be administered by Watcard swipe machines on buses. The proposed bus pass will include the condition of increased service, both in routes and hours.

At council, it is expected that the inaugural Governance Review Committee will report back to FedS Council with recommendation to changes in FedS Council,

where it was directed to focus for this year. It is uncertain what will happen to the annual Service Review with the resignation of the Vice-President Internal.

The Federation of Students will have its General Meeting on March 21 at 3:30 PM. Every full-time undergraduate is eligible to vote at the GM and can fill out a proxy form at the FedS office the week before if they cannot attend. The agenda of the GM will include consideration of the annual FedS fee, ratification of election results, election of the student Board of Directors (all councillor-elect are eligible), bylaw changes and "an annual report from the (remaining) executives" according to a fednews-list email.

POINT VS. COUNTERPOINT

Should UW Adopt a Universal Bus Pass?



ALICIA LIU
4B COMPUTER

The Universal Bus Pass will greatly benefit students and the Waterloo community. You pay nearly nothing (\$40 for the whole term) and get to take the bus for free whenever and wherever you want, even all the way to Cambridge! The community benefits from having students patron businesses outside the Plaza for once.

Once the UPass is in place, a lot of students who never used to take the bus, now will take the opportunity to explore Waterloo and this will in turn make Waterloo a busier, livelier and more vibrant community for all of us. After all, students will break even by taking just over

10 trips the entire term! Just think of how many times you need to get groceries. No more starving until Saturday waiting for the grocery shuttle!

Many of you can give up your fuel-guzzling cars, especially in the face of rising gas prices, and Al Gore's admonishment. Passing the Pass is a big step towards becoming an environmentally friendly campus.

The bus pass will also give you a wider

"Many of you can give up your fuel-guzzling cars."

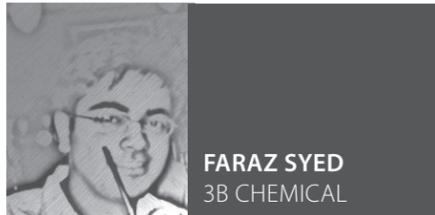
range of housing options rather than being confined to the expensive on campus residences and the student ghettos immediately surrounding the university. Now you can move out of your basement apartment and live for cheap in a nice house with carpet instead of cardboard for flooring, and still get to school in 5 minutes flat.

Have a bike you say? What about the winter, when you can't even see where you're riding because your eyes are so teary from the frigid winds? Just hang your bike on the front of the bus, and let the comfy heated bus take you home. This also works during the torrential rains in the other seasons. Besides, what happens when you need to go to Fairview to acquire the specialty leather pants to complete your Halloween costume? Bike there? I don't think so.

Moreover, the UPass has already proven to be a great success at Wilfred Laurier. To accommodate the Laurier students, Grand River Transit added new routes and more schedules, such as

late night buses to get them home from the bars! Imagine the extra routes and schedules that Waterloo will be able to generate with its much larger student population.

While it may not be completely fair to those students that will not use transit at all, I think the price of \$40 is a small price to pay for the benefit of so many students, not to mention the environment. Do a little good!



FARAZ SYED
3B CHEMICAL

I remember buying a pack of GRT tickets 2 years ago, for less than \$10. I still haven't used them up. If you're like me, a student who lives within walking distance to school (or in residence) and has no need to go to the mall every week, you'll see the fallacy in assuming we need a Bus Pass for \$80 a year. That's right, yet another way to dip into our wallets is being considered. The FEDS is calling for a referendum on the UPass issue in March.

First of all, it's wrong to impose this sort of fee on the entire student population. A 2002 survey by the UW Survey Research Centre showed that the numbers of students opposing or favouring the bus pass are roughly equal (see figure below). Clearly this is not a fringe opinion, and those who would not use the bus services enough would find themselves losing yet \$80 more per year.

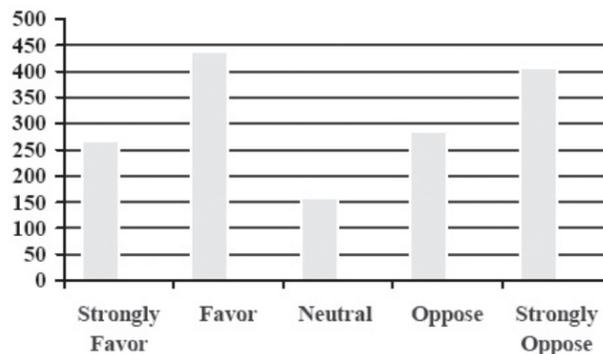
"How much more of these increases can students take before their budgets buckle under the stress?"

Note that this is the cost of some cheaper textbooks. Consider that tuition and coop fees are rising as well. How much more of these increases can students take before their budgets buckle under the stress?

I hope the masterminds behind the concept don't assume that the bus pass would get students to use the buses more often, because that is completely naïve. If students don't already have the determination or patience to figure out the transit system and wait for a bus in freezing cold, then a bus pass isn't going to be much of an incentive.

This is especially true for all the students living in residence, who get free grocery shuttles every week. With such convenience available, a bus pass is likely to be wasted among the 30% who say they don't need a bus pass.

If you're still not convinced that this is a cash-grab, consider the Grand River Transit's stand on this. They've stressed that they will not support any refundable fee, because they realize that they won't make money when the students who don't need this get their refunds (of which there will be many).



A 2002 survey demonstrated a split decision over a Universal Bus Pass



Your Actions Do Make a Difference

ANDREW SHANTZ AND
MIKE SPENDLOVE
ENGINEERS WITHOUT BORDERS

In this age of "the attention economy" and "compassion fatigue," where individuals are so beset with information and requests for assistance that attention and empathy are now considered scarce resources, it's all the more important to acknowledge that individual actions, as part of a greater social movement, have not been futile. While there is much that still needs to be done, one only needs to look at the history of social movements to see that there have indeed been great successes, and that even small actions have helped bring about major positive changes in society. In honour of Engineers Without Borders (EWB) Day, Thursday, March 1st, this article aims to present some of those past successes and how EWB hopes to be part of a global movement to bring about the end of extreme poverty.

There have been many successful social movements throughout history: the spread of democracy, the abolition of slavery in the Americas, and the push for universal human rights, among others. But perhaps one of the more notable examples of a grassroots-level social movement occurred at the beginning of the 20th century with the formation of the Congo

Reform Association (CRA). At a time of great colonial power, the CRA waged a campaign against the injustice imposed upon the people of the Congo 'Free State' by King Leopold II of Belgium. It took 4 years, but once the CRA had gained the attention and endorsement of authors such as Mark Twain, Arthur Conan Doyle, and Joseph Conrad, national governments soon got on board and in 1908, King Leopold relinquished personal control over the territory. It was to take another 50 years for the country to become independent, but this was a critical first step to Congolese freedom and it was all made possible through individual actions of missionaries and early photo journalists.

With the emergence of the new communication technologies following the Second World War, social movements have been able to reach a broader audience of individuals to press for change. For example, the civil rights movement in the United States was successful partly due to television, which broadcast the plight of African-Americans in the South into the homes of people across the country. Similarly, mass communication helped spark massive consumer outrage at working conditions in sweatshops owned by American manufacturers like Nike and the Gap, forcing those firms to reevaluate their policies overseas. Communication tools have empowered

movements to spread their message and have helped bring together like-minded individuals to reach common goals. Yet in each case, such technological tools are not catalysts but enablers of social change – it is individual action that harnesses them, and changes in individual opinion which make social movements a success.

EWB has also enjoyed some success thanks to individual action here at UW. A recent example is the case of Bill C-293, also known as The Development Assistance Accountability Act, whose purpose is to ensure that Canadian development assistance is focused on poverty reduction while maintaining human rights standards and taking into account the perspectives of the beneficiaries of this assistance. While this may not seem like a novel idea, it would in fact set an international precedent for making foreign aid more effective and accountable. EWB's role was to help muster support for the bill, and this was achieved on campus in the Fall of 2006 through individual student actions such as petitioning, email campaigns, and MP lobbying. In fact, C-293 was tabled due to pressure from the Make Poverty History campaign, which many UW students support by wearing a white wristband. While C-293 is still awaiting its third reading in the House of Commons, it is expected to pass, and regardless, it has been success-

ful in raising awareness of the issues surrounding foreign aid. The improvement of Canada's development assistance is now on the minds of those running our country and in the process of voting on C-293, they are educating themselves, forming opinions, and engaging in debate.

There are still many unaddressed problems in society, but as we witness a sea of change in Canadian thought on climate change and the environment, there is room for hope that social movements can bring about an end to the indignity of extreme poverty. While easier said than done, stirring the hearts and minds of individuals to commit to a movement is an integral part of this process. The challenges facing humanity in the 21st century should be looked upon with cautious optimism as we have had some success, but future initiatives will continue to require individuals that are inspired and rise above apathy to action. The opportunity for us, in our position of abundance, to fight for the voiceless and oppressed should trump these obstacles preventing our involvement, and bring to the surface the goodwill that we, as human beings, all possess.

Help end extreme poverty – the world is counting on you. Visit uwaterloo.ewb.ca to join EWB's individual action list and learn how you can help.

ENGINEERING SOCIETY EXECUTIVE REPORTS

EngSoc Donations!



CHRIS OLEKAS
VP FINANCE

Well, I hope everyone has had a wonderful reading week. I know I spent mine staying up late and waking up even later!

At the last EngSoc meeting we saw 11 teams or groups show up to request some funding. We also approved this year's budget which had \$2500 allocated for donations. At tonight's EngSoc meeting (Wednesday February 28th) we will be voting on allocation amounts.

In the order they presented we had:

Team/Group: Engineers in Medicine and Biology Society (EMBS)

Contact: Wilson Wong - cube@engmail.uwaterloo.ca

Amount: \$750

Why?: To cover refreshments at events held on campus with industry speakers as well as gifts and travel expenses for the speakers

Team/Group: Autonomously Guided Robot

Contact: David Le - dkle@uwaterloo.ca

Amount: \$187.17

Why?: Registration fees as well as miscellaneous electronics to participate in the UW Robot Racing challenge

Team/Group: Waterloo Off-Road Mini Baja Team (WOMBAT)

Contact: Karla Cassidy - kgcassid@engmail.uwaterloo.ca

Amount: \$800

Why?: Safety equipment, team shirts, and body panel material and university logo

Team/Group: Midnight Sun Solar Race Team

Contact: Jessica Whitney - jjwhitne@engmail.uwaterloo.ca

Amount: \$250

Why?: Body primer and sanding supplies to complete the aerobody of the solar car

Team/Group: Waterloo Space Society

Contact: Abeer Rahman - amrahman@uwaterloo.ca

Amount: \$475

Why?: Computer upgrades, promotional material, office supplies, rocket building supplies as well as other project material

Team/Group: Great Northern Concrete Toboggan Race 2008 (GNCTR-08)

Contact: Christopher Metaxas - csmetaxa@engmail.uwaterloo.ca

Amount: \$570

Why?: To get screened coveralls with EngSoc logo for the race

Team/Group: Canadian Engineering Competition (CEC 08)

Contact: Stephanie Robinson - s2robins@engmail.uwaterloo.ca

Amount: \$400

Why?: Money is to be put towards the printing costs of our sponsorship package for CEC 08 held at UW

Team/Group: Graduation Committee 2007 (Gradcomm 07)

Contact: Ryan Harris - rd2harris@engmail.uwaterloo.ca

Amount: \$500

Why?: Help subsidize venue procurement, music, lighting and decorations for Grad Ball

Team/Group: Engineering Without Borders (EWB)

Contact: Namratha Rejagopal - nrjagop@engmail.uwaterloo.ca

Amount: \$300

Why?: To help subsidize four junior fellow overseas volunteers in poverty reduction projects

Team/Group: Next Generation

Contact: Benjamin Sanders - bsanders@engmail.uwaterloo.ca

Amount: \$500

Why?: To help cover the construction costs for the portable power system that will be showcased across Canada - 7900 km, 10 provinces in 68 days, stopping at 29 high schools to recruit Engineering students

Team/Group: Federation Orientation Committee - Engineering (EngFOC)

Contact: Greg Fitzgerald - foc@engmail.uwaterloo.ca

Amount: \$500

Why?: To help cover the costs of food to feed the over 300 Engineering frosh leaders during the summer retreat

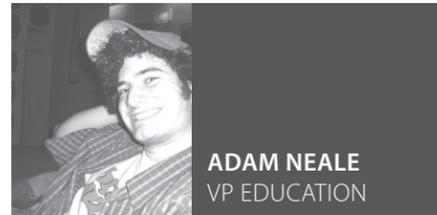
Phew... that took a while to type out but I hope you read through my little summary of what each team/group requested and have an idea of where you want us to spend our \$2500 in donations. The total amount requested is \$5232.17.

Please feel free to email these people with your questions to better understand why they would like a donation.

Again, we will be voting on Engineering Society donations at the next

Engineering Society meeting tonight February 28th, 2007 and I hope everyone comes out to vote for their class.

If I Had a Nickel For All the Events Going Down in March, Then I Would Have Change For a Coffee



ADAM NEALE
VP EDUCATION

I hope that everyone had a great reading week, and is ready to come back to a definitely fantastic, wicked and awesome month of March! The Engineering Society has a whole ton of things going on that I'm super excited to tell you all about.

First off, now that the FEDS elections are all over and done with, it is time for the Engineering Society to run our own little "who's going to be the next batch of executives" bash. The nomination period for EngSoc elections runs from Thursday March 1st through to Friday March 9th. If you are interested in running for one of the EngSoc executive positions or WEEF director, be sure to drop by the EngSoc to pick up a nomination form. Forms must be filled out and returned to the EngSoc office by 4:30pm on Friday, March 9th for the nominee to be considered a candidate. As a reminder, all positions are 16-month terms (2 work terms and 2 school terms) and there are term minimums for running for each position. Candidates running for President must be going into their 3A term or higher, candidates for VP External and VP Education must be going into their 2B term or higher, and candidates for VP

Internal, VP Finance, and WEEF Director must be going into their 2A term of higher. It is going to be a great election this time around, so if you're interested in running for a position, be sure to nominate yourself for the position of your dreams, and to everyone else, please remember to come out and vote on Thursday, March 22nd.

In addition to elections, there are plenty of other events going on this month as well. MOT is going to be happening in everyone's favourite POETS on Friday, March 2nd starting at 9pm. So come on out and be sure to enjoy in all the festivities. The semi-formal is taking place on March 8th. Tickets are on sale now and are going fast, so be sure to get yours before they are all sold out. Tickets are on sale all day in the EngSoc office, and in the CPH foyer during the lunch hour. As well, in what I have just now dubbed "The EngSoc Super Terrific Happy Hour of Power Weekend" the EngPlay, Scavenger Hunt, and Wheelchair Basketball tournament will all be taking place between Friday, March 9th through Sunday, March 11th. All of the directors have been working super hard to get everything organized, so be sure to come on out and have an amazing time at all these events. Also, be sure to be on the lookout for other events popping up throughout the month. With all of this EngSoc event goodness coming your way, your social life just got crazy busy! High five!

Hooray for Reading Week!



JEN CARROLL
PRESIDENT

As I'm writing this I'm enjoying a relaxed reading week Monday and it feels great! I hope that all of you have had an equally restful and relaxing reading week and that you got any actual reading done that you needed to. Now it's back to the grind of the rest of the school term and my oh my will it be a busy month of March!

Be sure to come out to the next EngSoc meeting (not actually in March, but on Feb. 28) to see the Paul & Paula Award

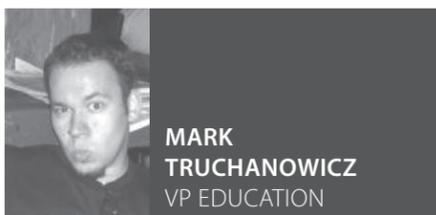
nomination presentations. These presentations are always full of high-class photos of the nominees and are a really fun time to watch. Also you can help direct the exec as to who you think should be given the awards this year.

This Friday (Mar. 2) is MOT so be sure to swing by POETS around 9 pm for some fun fun MOT action. Some other events happening this month include Genius Bowl, TalEng, Semi Formal, Bus Push, EngPlay, SCUNT, Potluck, and EOT.

Also, don't forget about the elections that will be happening over the next few weeks! Pretty soon you'll have a whole new EngSoc exec working for you so be sure to take some time to find out about all of the people running in the election and make an informed decision when you vote on Mar. 22.



Co-op Rankings This Friday



MARK TRUCHANOWICZ
VP EDUCATION

Welcome back from Reading Week everyone! Hopefully you all had a chance to relax and unwind this past week leaving all your midterm worries behind.

For those of you who still have midterms to write, best of luck and remember that they'll be done before you know it.

Just a reminder for those of you in the co-op process this term: first phase rankings go live at 1:00 PM this Friday, March 2nd and close on Monday, March 5th at 2:00 PM. In the event that you don't get an offer or get matched with a job, don't sweat it as daily postings begin on Tuesday, March 6th and continue through-

out the term.

Lastly, Ontario's Information and Privacy Commissioner, Ann Cavoukian, Ph.D. gave a talk entitled, "Privacy By Design - A Crucial Design Principle" this past Tuesday, February 27th, at the Modern Languages Theatre. Hopefully all of you that attended enjoyed the talk and special thanks go to everyone who helped make the event possible. It was a lot of work, but in the end it was worth it.

That's all from me for now, but get ready for March, it's jam packed with a whole slew of events, and don't worry about finals, they're still more than a month away! EngSoc Elections are also coming up so if you're interested in running for VP-Education and have some questions feel free to email me at bsoc_vpuedu@engmail for more details!

Proposals and WEEF Price is Right!

MARIA ARSHAD
WEEF DIRECTOR

I hope the reading went well. Well, for me I didn't read anything to say the least. Here is an update from WEEF. Another reminder: WEEF is handing out \$80,000. The proposals are due March 5th 2007 @ 4:30 pm and please check the instructions online. I have office hours and they are available online as well.

On Thursday March 1st, there will be a WEEF price is right in the CPH foyer; please stop by to have some fun and you

might just win something! You might want to check the WEEF's website to get yourself updated with some information on the items that WEEF donated to in the past.

Heads up to my dear funding council, the funding council meetings will be on March 8th and March 13th.

There will be a WEEF AGM on March 20th @ 4:30 pm in WEEF Lab, please plan to attend.

That's it for now! and remember WEEF is GOOD!

(www.weef.uwaterloo.ca)

Engplay: A Curious Comedy

MATT TSE
ENGPLAY DIRECTOR

The University of Waterloo Engineering Society presents Mr. 80% by James Sherman. The story of Sharon, an attractive, petite, and successful Manhattanite female attorney that is looking to share her apartment is told. Due to bad experiences with men, she decides to post an ad for only women or gay men to share her apartment. Sam and Jan are aspiring actors that are short on money and decide to answer this posting, but the problem is that they need to pretend to be gay to get the apartment. Much hilarity ensues where Jan brings home a drunken girl from the bar, Sam falls in love with Sharon and Leslie, a

gay friend of Sharon's, finds out that they aren't gay at all!

Tickets can be purchased at the Engineering Society Office, the Turnkey desk, in the CPH Foyer from 11:30AM - 1:30PM and at the door. There is no excuse not to see this amazing play with three show times available!

Friday, March 9th - 8:00 pm

Saturday, March 10th - 2:00pm and 8:00 pm

Cost: \$6 per ticket

So come along and bring a friend for a classy night of entertainment and live jazz! Any questions may be directed to the Producer Valerie Pearce (vpearce@uwaterloo.ca) or the Director Matt Tse (mtse@uwaterloo.ca).

Genius Bowl Next Week



ALICIA LIU
GENIUS
BOWL DIRECTOR

Hey all you Geniuses!

It's getting very close to Genius Bowl! Mark your calendars for March 7, and don't forget to sign your team of 6 up on the EngSoc Website and look out for the posters. Now here are the last set of practice questions:

Geography: What is the highest mountain in Europe?

Entertainment: Which body building competition did Arnold Schwarzenegger win 6 consecutive times during the years 1970-1975?

History: Socrates died by drinking a mixture of which poisonous herb?

Art & Literature: What's the name of one of Agatha Christie's most famous detectives, an elderly woman?

Science & Nature: What is the scientific name for the Northern Lights?

Sport & Leisure: What is the captain of a curling team called, who is responsible for strategy and usually the last person to go in the round?

EWB Day - End Poverty: We Can Do It!

NINA LI
1B NANOTECHNOLOGY

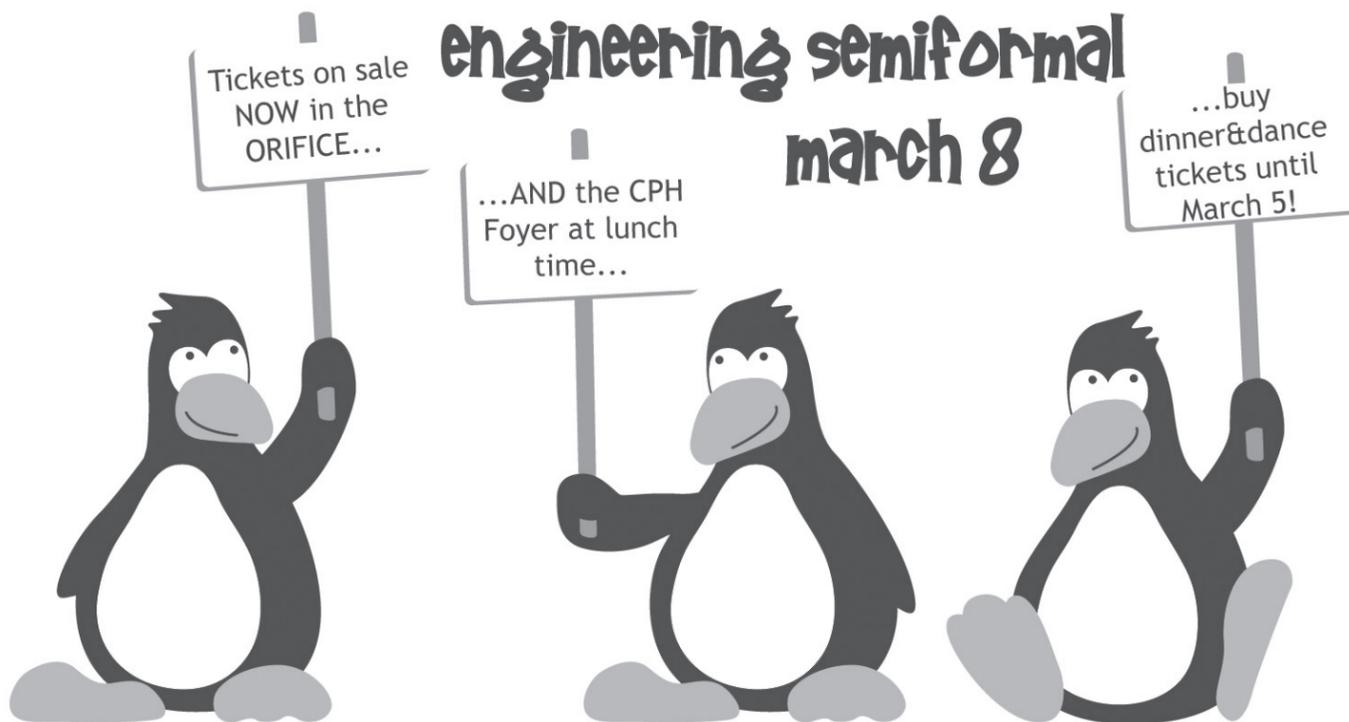
It's coming... Get ready for a day of full-blast excitement on Thurs, Mar. 1st! The EWB Day is a climactic moment for Engineers Without Borders. It will feature screamer events hosted by members of the EWB, including a piñata smash at the SLC where bystanders get to read both shocking and interesting facts about hunger, water scarcity, and health and sanitation issues, then have a chance to smash the piñata of poverty.

How much would it cost to achieve universal primary education? Why is the cost to achieve clean water and sanitation around the world almost equal to the amount that Europe spends on consuming ice cream?

Also keep your eyes open for barely clothed individuals running around campus with letters 'P' 'O' 'V' 'E' 'R' 'T' 'Y' painted on their chest (or back), ready to be splashed in the spirit of "Splashing out Poverty." Together with spraying messages in the snow with cool-aid, these are just some of the foreshadows of this year's EWB Day. So come out and join us, and don't forget bring your "end poverty" spirit!

What would you do to end poverty?

Prepare Your Happy Feet!



K-W Granite Club (99 Seagram Drive) - \$35 dinner&dance - \$15 dance

Upcoming Events from EngSoc

Sun Feb 25	Mon Feb 26 Arts Week	Tues Feb 27 Arts Week 11:30 IW Meeting	Wed Feb 28 Arts Week 5:30 EngSoc Meeting 4	Thurs Mar 1 Arts Week EngSoc Nominations Begin	Fri Mar 2 Arts Week MOT	Sat Mar 3	Check out up-to-the-day event postings on the EngSoc website at engsoc.uwaterloo.ca
Sun Mar 4	Mon Mar 5 WEEF Proposals Due, 4:30	Tues Mar 6 11:30 IW Meeting	Wed Mar 7	Thurs Mar 8 Semi-Formal WEEF Funding Council Meeting	Fri Mar 9 EngPlay SCUNT IW Deadline, 9pm	Sat Mar 10 EngPlay SCUNT	
Sun Mar 11	Mon Mar 12 EngSoc Election Campaigns Begin	Tues Mar 13 11:30 IW Meeting WEEF Funding Council Meeting	Wed Mar 14 5:30 EngSoc Meeting 5	Thurs Mar 15	Fri Mar 16	Sat Mar 17 St. Patrick's Day	

Co-op Student Council Report #1

ARI TAUB
3A MECHANICAL

Hello all! In case you don't remember the last VP-Ed report, I've been acting as EngSoc's representative on the Federation of Student's Co-op Student Council (CSC). For those who aren't aware, the CSC is a committee which meets approximately once a month to discuss issues which affect all co-op students. Usual attendants include one or more representative students from each faculty, the FEDS VP-Education (currently Jeff Henry), and a staff representative from CECS.

The first meeting of this term was held on February 5th. There were several major topics discussed during the meeting. The first was the recent JobMine server issues which affected most of us during the initial round of postings this term. One topic brought forth was employer opinion throughout the crisis, as displeased employers could mean fewer jobs avail-

able for us. CECS assured the council that employers were kept well informed during the server issues and that there were few complaints and plenty of support. Also brought forward was the confusion that some students experienced due to the 3:00 AM postings close rather than the usual midnight deadline. CECS has been made aware of this and will hopefully try to avoid similar confusions in the future.

The next topic of the meeting was student perception of CECS. There are some students who feel that CECS works to appease employers (and better UW's reputation) rather than help students find quality employment opportunities. CECS would like to gather student opinion and potentially put together focus groups or surveys. If anyone has any opinions on this matter that they would like brought up at the next council meeting please contact me.

There was also a brief discussion about the usefulness of field coordinator visits. The discussion seemed to suggest that

many students have useful discussions with coordinators, but equally many students find their field visits to be pointless. The idea of optional site visits was discussed, but not in much detail.

Lastly, PDEng was brought to the table as PD courses are now starting to form in other faculties and may eventually affect all co-op students. Not much was said, but course evaluations and making PD courses less bothersome for students will likely be a hot topic in later meetings.

The next CSC meeting will most likely take place in early March. Meetings are open to all co-op students so if you've got a lot to say feel free to tag along. Food is provided at meetings. Stay tuned to the EngSoc mailing list for CSC meeting details. Once again, if you've got any feedback or opinions on the aforementioned topics or other issues that you would like brought up at the next meeting, or if you've got any questions about the council please don't hesitate to email me. (ataub@engmail)

Cheese, Done Right.



Some may hate me for what I am about to say, but I will go ahead and say it anyway: I hate boxed Mac & Cheese! There is something revolting and unnatural in the idea of powdered cheese. Seriously, think about all the wonderful dishes that call for cheese and replace it with powder. Ham and powdered cheese sandwiches, broccoli dipped in cheese dust Mmm, not.

There is a false perception that anything old-fashioned is tricky and time consuming. For Mac & Cheese, this tenet does not apply. Thanks to my friend Kathryn for rocking my world with this recipe!

This scrumptious cheese sauce can be prepared before the pasta is finished cooking. Easy-smeasy and calls for no more ingredients than you can count on one hand. And it is just as quick as the boxed version. Also, the portion shown here is just right for that perfect night in, alone.

Gourmet Mac & Cheese

1 to 2 tbs. butter or margarine
 1/2 tbs. flour
 3/4 c. milk (2%, skim, whatever)
 1/2 c. shredded cheddar (more or less depending on your taste)
 1/2 to 1 c. dry macaroni

In a medium pot, boil water and cook pasta according to package instructions. In a small saucepan, melt the butter margarine until it liquid. Do not let it over bubble. Mix in the flour gradually so that the texture resembles a watery paste. Let the mixture heat for about 30 seconds. Add the milk and heat for 1 minute, the milk should be hot enough to melt the cheese, but not boiling. Sprinkle in the cheese, a small handful at a time while continually stirring. When all the cheese is melted, add the sauce to cooked pasta and voila!

JobMine Interruption Unprecedented

Continued from Page 1

block of data at the onset, the database could be recovered through using backups, transaction logs, and information from other authoritative sources.

Was there sufficient manpower available to solve the problem?

CECS has one technical service person on staff who was involved in the system recovery. This individual is formerly of IST, and was a key member of the original JobMine development team. Additional help came from IST staff who worked through the weekend to locate and fix the problem. Mr Kibble revealed that about 10 individuals from IST were involved in the fix, including:

- 2 IST Database administrators
- 1 IST Unix administrator
- 1 JobMine Application Developer
- 1 IST Networks Unit Analyst
- 1 IST Application Administrator

IST Directors and the Project Lead were on standby and monitoring the situation to ensure that resources were available as needed, as well as keeping other staff in CECS such as Mr. Naese and CECS Executive Director Peggy Jarvie apprised of the situation.

What was the timeline?

JobMine was taken offline on Friday, Jan 19th when hardware database errors were discovered. The exact source of the error was unknown; however, Oracle support was contacted late Friday afternoon. Work continued until about 1:00am Saturday morning to confirm that the problem was an isolated case.

Work resumed with Oracle support

at about 8:00am Saturday morning, and at that point a database recovery was attempted. During the recovery, the disk array used for JobMine exhibited unusual behaviour and was deemed unreliable.

Work continues... to determine the cause of the disk failure.

Replacement hardware was found, and the rest of the weekend was spent to recover the original JobMine system. On Monday, CECS staff returned for their normal day and the system was verified. Once the checks were done to a satisfactory extent, the system was made available Monday evening.

Any lessons learned?

Mr. Kibble revealed that work continues between CECS and the hardware vendor to determine the cause of disk failure. While disks will fail, the alerts usually seen upon disk failure were not present in this case, which contributed to the long diagnostic period in this specific instance. Additionally, Mr. Kibble stated that IST is looking at improving the backup and recovery strategy which will reduce the time to reconstruct databases for JobMine and other key campus applications, (e.g. Trellis, Financials, Quest, etc.) which was an additional time limiting factor. Mr. Kibble further credits the quick JobMine

system recovery to the close working relationship between CECS and IST, which enabled the collaboration of the two groups early at the onset of the problem.

Student feedback

From interviews with current Waterloo co-op students, some are quite dissatisfied with the lack of usability of the JobMine system, and also its poor performance in general. The uncertainty associated with the shutdown was a cause for many students' concern. The information page was updated infrequently, and often give little hint as to if or when JobMine would come online again. There are also students who are concerned that the Jobmine system has hindered the success of the Waterloo co-op program. For example, Mike Boos from Systems Design wonders whether major companies such as Google have chosen to operate outside of the JobMine system because of the difficulties in using JobMine. He believes that this may force Waterloo co-ops to compete for jobs with a wider range of applicants from different schools thereby reducing our chances for those positions. He is also concerned that students will unfortunately be forced to deal with JobMine's deficiencies, as there are few alternatives to using the JobMine system.

Conclusion

Despite all of the frustrations that the JobMine system has brought to Waterloo co-op students, the benefits of the current system over the previous far outweigh the disadvantages. Older students may still remember the stress of having to rush to the co-op building and the crush of students trying to stuff their paper resume and transcript into an overflowing metal box before 8:00pm each day!

The co-op application system here at the University of Waterloo has certainly improved from 4 years ago. However, as this experience with JobMine shows, we should not be easily satisfied with our current condition. Instead, measures are and should be continuously taken to improve the JobMine system. Improving the JobMine system will continue to help students, employers, and CECS staff alike to streamline the job application process, as well as reduce the incidence and effect of JobMine system shutdowns in the future.



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 to schedule your shift.

North Koreans Take Charge Against Global Warming

GABRIEL CHAN
3B SYSTEMS DESIGN

After five rounds of the six-party talks, North Korea finally came to an agreement with the United States of America (USA) on Tuesday, February 12 during the third phase of negotiations.

Under the agreement, North Korea pledged to close its only nuclear reactor within 60 days in return for 50,000 metric tons of fuel; they will eventually receive another one million tonnes of fuel oil when it permanently disables its nuclear power plants. This deal has shown the true side of the great Emperor Kim Jong-Il of North Korea, who has chosen to let his subjects bare the burden of using up those resources from a USA addicted to energy consumption. Although a million metric tonnes of oil will hardly be missed in the USA, the North Korean authorities will be struggling to figure out how to use this sudden increase of resources.

One of the major sticking points during the negotiations was the amount of resources that the USA was going to hand over to North Korea. The USA originally wanted to give five million tonnes, but the Emperor's envoy persuaded the US delegates that North Korea has a very fragile environment which they are trying to preserve. The North Koreans suggested that they take it one step at a time, perhaps today next year the USA's offer for a 500% increase will be accepted at the next round of six-party partying.

All major parties at the talks were satisfied with the results:

North Korea is the world's model student for environmental awareness and the fight against global warming. The effect of the In fact, North Korean Foreign

Minister Bae Yong Joon had earlier made a generous offer to the US on regarding their addiction to energy consumption, "if you do not start turning off your lights, we can turn them off for you," pointing to the Emperor's small collection of nuclear warheads. North Korea had detonated a large portion of their GDP to demonstrate their

light-turning-off devices last year.

The United States claims a moral victory over Canada, who has been grilling them over their refusal to ratifying the Kyoto Protocol. A White House spokesperson announced, "now that we have the Pyongyang Protocol in place, it is a new step forward in the global fight against ter-

rorism... err I mean global warming."

Finally, the host People's Republic of China is especially happy about the deal, which effectively gives them an extra 120,540 square kilometres of land and population to dump their goods, services, and pollution onto.



North Korea's contribution to the fight against global warming can be clearly seen every night, in stark contrast to its neighbours.



Sandford Fleming Foundation
E2 3336, ext 84008, sff@engmail
www.eng.uwaterloo.ca/~sff

WINTER 2007 TECHNICAL SPEAKER COMPETITION RESULTS

FIRST PRIZE

Andrew Lee, Systems Design Engineering
"Wind Resource Assessments: On-site Monitoring Principles"

OTHER COMPETITORS

Aakarsh Nair, Electrical and Computer Engineering
"Objc: Interoperability Made Easy"

Andrew Zwart, Mechanical and Mechatronics Engineering
"Energy Efficient Building Concepts"

SANDFORD FLEMING DEBATES

CANCELLED

Funding for these awards comes from engineering student contributions and depends on them for continuation

Anniversary Celebrated in Nation's Capital

Continued from Page 1

after recognizing some of the other important figures in attendance, gave one of his usual informative and anecdote-filled speeches. He talked about the meaning of the 50th anniversary celebration's slogan, The Spirit of 'Why Not?', which is based on a memorable quote by the late Irish dramatist George Bernard Shaw. The quote reads "You see things; and you say, 'Why?' But I dream things that never

spawn from curiosity, the second part is what sets us apart. It captures what makes Waterloo innovative because it represents a visionary who is constantly thinking ahead to how things could be improved. The idea of Co-operative Education, of mixing academia with real work in the field, was one that was very new and untested, and knocked by some naysayers as the makings of a glorified trade school. Yet the co-op program has grown from about a dozen employers and less than 100 students at the

for offering its students the chance to get a world-class education hand-in-hand with practical experience in the industry.

Andrew Telegdi was the next speaker, and he reaffirmed the fact that the university built this community and vice versa. He went on to explain that as an immigrant, attending the University of Waterloo was one of the most important things that happened to him. He served two terms as President of the Federation of Students (1973-74) and got his first experience fighting for students, which inspired him to pursue a career in politics although his degree was a Bachelor of Arts in psychology. He vouched for government support for post-secondary education, and told a story about how someone had once remarked to him during a recession that the only way to ensuring a good economy was to constantly be in wartime. Telegdi responded by explaining that universities like UW are our new army and will ensure the well-being of the economy, noting the several spin-off companies and the thousands of graduates thriving in the workforce.

Peggy Jarvie followed Telegdi and gave a presentation titled '2017: The Workplace'. The theme of the talk was, "How do we prepare students for the changing workplace?" She expressed that it starts with

places. "We are living in a world where moving information is now basically free and forms of communication are constantly changing," said Jarvie, as she held up her Blackberry. She explained that UW is partaking in a number of initiatives to better prepare students for the future. One such initiative is the Professional Development courses that all co-op students will soon be required to take on their work terms, as the other faculties are following Engineering's lead due to the success of the PDEng program. Other initiatives include introducing new cutting-edge programs like Nanotechnology Engineering, facilitating US employment for co-ops, and the development of a new information system that will allow students and employers to better market themselves to each other.

Wrapping up the night was Jason Coolman, Director of Alumni Affairs, who thanked everyone for attending the event and drew winners for raffle prizes, which included UW merchandise. He finished by showing a clip from the 1950s theme January kick-off of the 50th anniversary celebration held on campus at the PAC, where a Marilyn Monroe impersonator sang "Happy Birthday" to UW. Coolman then invited everyone to stick around for some special birthday cake as a slideshow of historical pictures from campus played on the screen.

The event was an enormous success with a great turnout, and it gave people a chance to meet new people, catch up with old friends, and celebrate the great history of the University of Waterloo. The Faculty of Engineering will be holding its own 50th anniversary celebration on March 1st in Toronto at the Royal York Hotel. For more information about the 50th anniversary and related events, visit www.anniversary.uwaterloo.ca.



Robert Woolley (CompEng '06), now with Wind River Systems in Kanata, and UW President David Johnston

were; and I say, 'Why not?'"

Johnston explained that while the first part of the quote is something normal that

university's infancy to nearly 400 employers and 3600 co-op students today, and has made UW renowned internationally

building a greater understanding of the workplace and how technology and demographics are changing the face of all work-

if you can
you can

DODGE the tool
a

BALL

TOURNAMENT

Sunday March 4th

the PAC

9am-2pm

e-mail kolsen@engmail.uwaterloo.ca to register by March 1st
up to 7 members per team, six on the court at a time

ARTS & ENTERTAINMENT

A Tribute to Waterloo on the Occasion of its Twenty-Fifth Anniversary

The following is from a 1982 University of Waterloo Staff Association Newsletter:

After a hard day of lecturing, coaching the men's squash team and battling cases, Queen's Counsel, "Barney" retired to the faculty lounge for some relaxation. After a scotch or two, he started scribbling notes on his napkins. He started reminiscing about the things that had happened here at the University of Waterloo. The end result was a tribute to U of W on this, its 25th Anniversary. He is hoping that this poem will capture the honour of being used officially as the theme for the anniversary. It touches on just about every aspect of university life (and it rhymes, too)

-Terry Bolton

A Tribute to Waterloo on the Occasion of its Twenty-Fifth Anniversary
by R.G.R. (Barney) Lawrence, Q.C.

In times of change and innovation
A challenge stands before our nation
Inspiring words are all too few
Let us believe in Waterloo.

To those who cry "Go Slow! Go Slow!"
"We must maintain the status quo"
We have no place for such as you
For we believe in Waterloo.

Napoleon in all his wisdom
Laboured on the metric system
Had trouble with his "Two times Two"
And he flunked out at Waterloo.

Descartes and Einstein showed their
wrath
When they applied to "Applied Math"
Of marks they simply had too few
To qualify for Waterloo.

Where are we from? Where are we going
We floundered on - no way of knowing
Hagey was the first who knew
How he believed in Waterloo.

Some sharp as tacks - or really Needles
Who knew finance with all its wheedles
Believers then were all too few
Ira believed in Waterloo

"Turn farmland to a University"
And this in face of real adversity
This was then the cry and hue
Did you believe in Waterloo?

"It can't be done" The sages said,
And most of them just stayed in bed
But lots of you knew what was true
For you believed in Waterloo

"Teach Engineering? Out of sight!"
But we had faith in what was Wright
Math's just a concept-Artsmen were few
But Doug believed in Waterloo.

"This new project has got to stop:
Bert Barber struggled with "Co-op"
"Join industry and study too!"
"You must be nuts at Waterloo!"

We've weathered pestilence and plague
"Tass" and "The Chevron" laid an egg
"The Imprint Red?" It's far more blue
And it believes in Waterloo.

H.K.L.S. and Architects
Now study here without pretext
Optometry so bright and new
Our vision's fine at Waterloo.

Draft-dodgers and Vietnam really hurt,
But then we had our leader, Burt,
And in the end he saw us through,
For he believes in Waterloo.

In Math we now had world renown,
Computers know "The chips are down"
IBM and "Data" too,
They believe in Waterloo.

Our engineer is no man's fool
His emblem is "The Ridgid Tool"
Two tons of concrete were too few
He knocked it off at Waterloo.

So all of you who gather here
Please raise your whiskey or your beer
And drink this toast--we know its true
"We All Believe in Waterloo."

DUAT LE
4B COMPUTER

Too bored to produce
poems which meaningful yet obscure, I
write:

At cordinates X,Y
Stood a raven
Autumn afternoon

It's my way, parodying Basho, to
portray a black dot

A black dot which is more
beautiful than a real raven

O Basho and Stevens
O Hughes
Your thriving cities are
only black dots on the map
Black dots are
the words you wrote
and their vast meanings behind them

The room is a black dot
The sun is a black dot
The universe is a black dot
My eye, too, a black dot...

Do Not Be Scared To Fall

DR. HARSHAVARDHAN ADIKANE
VISITING SCHOLAR, CHEM. ENG.

Let them laugh
Do not be scared to fall
You are bound to rise high
Do not be scared to fall

The storm will come and go
Do not forget to hold
A branch of love
It will take you to shore
Where you will meet
Your dreams all
Do not be scared to fall

Thank those
Who help you a lot
Thank those
Who scold you a lot
Life is not
What others thought
Believe in yourself
You will be believed by all
Do not be scared to fall

Days and seasons
Are bound to go
Winter and summer
Let them come and go
What you have
It has to go
Hold the laugh
Through the pain of love
You will shine
Let the darkness fall
Do not be scared to fall

Submit your poetry to
iwarrrior@engmail

Album Review: illScarlett - EPdemic (Sony 2006)

JENN BLACK
4B CIVIL

Track Listing:

1. First Shot
2. Heaters
3. One-a
4. N.T.F
5. Not a Prophecy
6. Mary Jane
7. Pacino
8. Rally

Following the success of multiple independent albums, Mississauga's illScarlett have hit it big with their first major label (Sony) album entitled EPdemic. With two singles, "Heaters" and "One-a", already on heavy radio rotation this ska-punk quintet is sure to have a bright future ahead. illScarlett are Swavek Pior (drums), Alex

Norman (vocals/guitar), Will Marr (lead guitar), Johnny Doherty (bass), and Patrick Kennedy (turntables).

Their first single, "Heaters", is a perfect example of why illScarlett stands out from the crowd; the song is a unique mix of the band's staple sound and reggae. My favourite song on the record, "Mary Jane", is another prime example of illScarlett's distinctive sound; it is also extremely catchy with a different beat than most of the mainstream music out there today.

Other songs on this disc that I enjoyed immensely are "First Shot" and "Pacino". I don't know why but I'm always drawn to the first song on almost every CD I get but "First Shot" has more to it than just its track listing; it is fast-paced and radio-friendly with great lyrics. "Pacino" dials things down a notch - it has a slower pace with a more melodic tune but it'll still have

you singing along just like the rest of the songs on the record.

Initially, I purchased this CD for the insanely catchy second single "One-a". After taking a cursory listening I could easily see (or hear) that this is one of those records you can listen to all the way through without finding a note to dislike. It makes you happy you went out and spent the money rather than just downloading the one song.

"One-a" is the quintessential college/university party song - it has all the party stereotypes and has a amazing beat that'll keep any party rocking. If you've heard and enjoyed this song, I highly suggest you go out and get this album. If you haven't heard these guys yet, I suggest you give them a try; you won't regret it.

POETS Movie Schedule

Mon Feb 26	Tues Feb 27	Wed Feb 28	Thurs Mar 1	Fri Mar 2
Season 6, Episode 8 and 9 of 24 The Matrix Resident Evil	The Girl Next Door Mean Girls Cruel Intentions	POETS Movie Challenge	Blazing Saddles Robin Hood: Men in Tights Spaceballs	Alien Aliens Alien 3
Mon Mar 5	Tues Mar 6	Wed Mar 7	Thurs Mar 8	Fri Mar 9
Season 6, Episode 10 and 11 of 24 Top Gun Twelve Monkeys	A Night at the Roxbury Ali G in Da House Johnny English	The Strand The Shining Dreamcatcher	Happy Feet The March of the Penguins Madagascar	Anger Management Happy Gilmore The Waterboy

Enginoku

HAROUT MANOUGIAN
3B ELECTRICAL

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	η	q	⋈					

Last Issue's Enginoku Solution

ϖ	η	ϕ	⋈	ω	⋈	⋈	q	ϱ
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⋈	ϱ	ϖ	⋈	ϕ	q	⋈	ω	η
ω	⋈	⋈	η	ϖ	ϱ	q	ϕ	⋈
η	ϖ	⋈	q	⋈	⋈	ω	ϱ	ϕ
ϕ	ω	⋈	ϖ	ϱ	⋈	η	⋈	q
⋈	q	ϱ	ω	η	ϕ	ϖ	⋈	⋈

Prof. Quotes

“We’re going to beat this equation up now...”
-Annable, CIVE 381

“Up until the 1950s, there were these people there, and they were called farmers. And they were kind of cool...”
-Annable, CIVE 381

“That’s what grad students and co-op students are for! You send them out and measure the crap out of things for years.”
-Annable, CIVE 381

“This isn’t a mentally-disabled flow...”
-Annable, CIVE 381



“The water’s in a happy spot up here... it’s going to get a little more upset down here because something’s screwing with its natural system.”
-Annable, CIVE 381

“How about instead of this - because I’m getting pretty bored - we look at pretty pictures?”
-Annable, CIVE 381

Prof: “So for the short-term case...”
Student: “Aren’t we doing the long-term case?”

Prof: “What I have is a short-term memory.”
-Cascante, CIVE 354

“Particles like to get together and not be rejected.”
-Huck, ENVE 375

“What sort of respectable engineering equation doesn’t have a coefficient in it?”
-Huck, ENVE 375

(on IRS day) “They’re studying some applied fluid mechanics... possibly involving disinfectants.”
-Huck, ENVE 375

“I’m going to try to use every colour in this set of pens. I’ve got to have some fun if I can’t go drinking with you!”
-Huck, ENVE 375

“Who wants to have a DC generator supply power to a capacitor? Only people in Math.”
-Nigim, ECE 362

“When I told my fourteen year old son to do it, he said, ‘I am not nerd like you.’”
-Nigim, ECE 362

“What’s point oh one between friends?”
-Sedra, ECE 332

“Good luck on your test. I will be thinking of you from San Francisco.”
-Sedra, ECE 332

“If your gieger counter is ticking, the best solution is to wear earmuffs.”
-Straube, CIVE 507

Send your prof quotes to:
iwarrior@engmail.uwaterloo.ca

the Iron Inquisition

Teri Leung, 2A Systems Design

What’s your favourite thing about midterms?



“When they are over”
Jesse Ross-Jones, 2A Systems Design



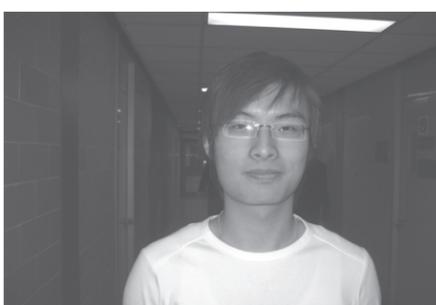
“That we don’t have them in Germany”
Matthias Adler, 3B



“Motivates me to catch up with the subjects”
Kevin Liu, 1B Electrical



“Find out how precious time is!”
Mahtab Ghamsari, 2A Systems Design



“Having an excuse of not going to class”
Peter Kao, 2A Systems Design



“Life is just so much better afterwards”
Christie Kong, 3B Electrical



“No classes”
Zo, 2A Mechatronics



“Skip classes”
Ming Ho Wong, 2A Civil