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THE IRON WARRIOR

THE NEWSPAPER OF THE UNIVERSITY OF WATERLOO ENGINEERING SOCIETY VOLUME 28 ISSUE 4 | WEDNESDAY, MARCH 14, 2007

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Where Art Meets Engineering: The Archies In Cambridge

A look at our Architecture brethren, and how they fit into the engineering family

FARAZ SYED
3B CHEMICAL

Courtesy: Waterloo Architecture Students Association

School of Architecture building in Cambridge

Think back, if you can remember, to Winter 2005. It was nearly two years ago that the news surfaced: Architecture was to join Engineering. There was certainly a lot of goodwill generated by the announcement, mostly in the form of articles in the Iron Warrior welcoming the new program. It's been nearly two years since Engineering welcomed Architecture to the family, but how much have we learned about the program and its people since? True, it's difficult given their unique situation: unlike other recent additions to Engineering, such as Mechatronics (in 2003) and Nanotechnology, Architecture had moved away to the Cambridge campus much before it joined the faculty. We never really had the chance to deal with them on a regular and frequent basis.

Through the responses of Architecture students, this article tries to piece together a picture of what life is like for an Archie.

What Is It?

Let's dispel any ignorance and misconceptions first: it's not called Architectural Engineering now, and moving to the faculty has not "redefined" the program in any way. Architecture is a profession much like Engineering. In Ontario, it's governed by the Ontario Association of Architects (OAA). The OAA is a self-regulating body, much like the Association of Professional Engineers of Ontario, and "is dedicated to promoting and increasing the knowledge, skill and proficiency of its members, and administering the Architects Act, in order that the public interest may be served and protected."

Just as there are legal restrictions in using the title "Professional Engineer", the title "Architect" is restricted to registered members of the OAA. To be able to call yourself an Architect in Ontario, you need to have an accredited degree (at UW, this is the Masters of Architecture degree), have 3 years of experience in the field, pass extensive OAA exams and take part in an admission course. Once registered, you continue your education through the OAA Professional Excellence program. There is also the option of completing an undergraduate degree only and then entering into an internship program with the Royal Architectural Institute of Canada. Regardless of which route you take, each candidate must pass the Architect Registration Examination, which is recognized in Canada and the USA.

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Privacy by Design

Using Technology to Protect your Privacy

RUTH-ANNE
VANDERWATER
3T COMPUTER

On Tuesday, February 27, 2007, Ontario's Information and Privacy Commissioner, Dr. Ann Cavoukian came to UW to speak to Engineering and Math students about the importance of protecting privacy and how technology can be used to do this. The event, sponsored by EngSoc, MathSoc, Women in Engineering, the Department of Management Sciences and the Faculties of Engineering and Mathematics, was first considered over a year ago by Professor Ken McKay. Prof. McKay, who works in the Department of Management Sciences and is also involved with PDEng, used to teach a fourth year MSCI course relating to information and privacy. He contacted the Office of the Information and Privacy Commissioner to see if Dr. Cavoukian would come to Waterloo to speak to students. It was after the initial contact with the IPC Office that Prof. McKay contacted EngSoc requesting our assistance in the preparation, organization and sponsorship of the event. Since this event was originally scheduled to occur late in the fall, the A-Soc exec decided to get involved.

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Courtesy: Office of the Information and Privacy Commissioner/Ontario

Ann Cavoukian speaking to UW Students on Febuary 27, 2007

Iron Editorial: The Technology that Preceded All Others

HAROUT MANOUGIAN
EDITOR-IN-CHIEF

There is a problem that engineers worldwide have tackled for thousands of years. Great strides have been made over the centuries, without which the unbelievable progress that the field has undergone in the twentieth and twenty-first centuries would not have been possible. In fact, without this technology, significant human achievement would not exist. The problem at hand is the transfer of information from one person to another, separated by space and time. The solution is called communication.

Linguists have several theories about the origin of spoken language, that momentous day when communication expanded beyond beating your chest and screaming. You can learn about the "bow-wow" and "yo-he-ho" theories of the origin of language by taking ENGL 306A. Language specialists have differing opinions on whether evidence can be collected to show the existence of one original Proto-Language. Whether it was a single person who decided to assign arbitrary meaning (or perhaps they were not originally arbitrary) to pressure fluctuations caused by the vocal organs or whether it was a natural development that occurred simultaneously in different locations might never be concluded. What is conclusive, however, is that it set mankind apart from the beasts of the earth. Names could now be given to things and concepts that kinesics – non-verbal communication – could not easily accommodate. With spoken language it became possible to undertake a collective effort to understand the world we live in and human communicative ability expanded beyond a direct line of sight.

Cave drawings, hieroglyphics and other inscribed examples of communication have been discovered throughout the world. The locations of the next giant leap in communication technology can be pinpointed, however. It was in Phoenicia that a system was first devised to inscribe symbols that stood not for things or concepts, but for verbal syllables or "phonemes", collectively called an alphabet. Also, in China, pictures were standardized into "logograms" establishing a standard system of writing. Thus, the recording of information was standardized, making it possible to efficiently communicate with people separated by time. Phoenicians were no slaves to physical distance either. Their engineers, besides being pioneers in information technology, also developed seaworthy vessels that allowed them to spread the breakthrough from the Levantine coast throughout the Mediterranean. As new alphabets were adapted for different languages, knowledge began to amass in scientific and philosophic centres. Plato's Academy and Aristotle's Lyceum were founded in Athens and the Great Library of Alexandria was constructed. Also, the Egyptian adoption of papyrus as an information storage medium freed recorded communication from the labour-intensive practice of carving stone. In these early days, writing allowed the development of a code of laws, and subsequently, organized systems of government surfaced: the beginnings of civilization.

Wishing to further break down the barriers of distance, the Romans, whose alphabet is now used on seven continents, used roads and horses to ensure constant contact between the divisions of their expansive empire. Roman engineers could thus build on the knowledge and successes of their predecessors and were able to construct massive structures and military siege weapons.

Then, the transfer of information was disrupted. With the fall of the Western Roman Empire, much of the information that was collected was lost under the rule of the illiterate, yet victorious, barbarians. This was a setback that took centuries to overcome as the Western world stagnated during the Dark Ages.

Fortunately, literacy was not lost entirely. Thomas Cahill's book, How The Irish Saved Civilization, details how Irish monks brought Roman thought back to Britain and continental Europe. Throughout the Dark and Middle Ages, the Church played a pivotal role in ensuring the continuation of literacy and established new centres for the communication of ideas and knowledge – universities.

A single man is credited for the next revolution in information technology. It was in Germany in 1445 that Johannes Gutenberg invented the printing press. This event is said to have sparked the Renaissance age as it made books available to a wider spectrum of people. Not only did it make communication cheaper, but it also meant that, for the first time, writing could be transmitted in its initial form without the human error associated with copying manuscripts. Education and literacy rates increased throughout Europe. Again, more efficient communication led to expansion in other sciences and art.

With the printing press, figures such as Thomas Paine and Jean-Jacques Rousseau disseminated their ideas about liberty and rights, bringing the American and French people to revolt against their ruling monarchies and establish democratic republics. It was with the advance of communication that democracy became feasible for large countries, as opposed to the city-states in which it was first developed. Today, democracy is not only employed by all of the world's developed nations, but even groups of engineering students organize themselves into societies and elect representatives.

The current era of communication saw the field become the domain of electrical engineers. In 1837, Samuel Morse developed and patented the electrical telegraph and the world entered the Age of Telecommunication. Last Saturday, March 10, was the 131st anniversary of Alexander Graham Bell's famous quote: "Watson, come here. I need you", which was the first message ever to be transmitted by telephone. It was not until 1927 that the first transatlantic telephone conversation took place.

Although wireline technology is still entrenched in our culture today, its wireless competitor began as early as 1897, with the construction of the first radio station on the Isle of Wight in England. Television was first demonstrated on January 26, 1926. Sporadic broadcasts were available only a few years afterwards. By 1941, New York and Pennsylvania had begun officially licensing commercial television stations. Communication using electromagnetic radiation as a medium paved the way to portable, mobile telephones and even allowed communication to and from satellites.

As space is replacing copper as a channel, so the computer is replacing paper as a terminal. Today, a generation is growing up that cannot remember a time before the Internet, the Great Library of the modern world. Besides being a depository of information itself, the Internet also hosts a variety of communication mediums embedded within itself. Chat rooms and email quickly gave way to instant messaging. Today, personal networks such as Facebook and video libraries such as YouTube compete to become the next forum of choice. Yet, even they will likely become passé as even newer ideas surface.

It took thousands of years of advancement to place this newspaper in your hand. First, an alphabet is used to code information. It is arranged on a computer and sent to a publisher over the Internet. The information is then committed to paper and ink using massive cousins of Gutenberg's original printing press. Or perhaps you are reading this at a computer on the other side of the world from Waterloo on our newly-updated website at http://iwarrior.uwaterloo.ca. David Yip, a former Editor-In-Chief and current Webmaster/Technical Editor, has completely revamped the site to reflect the Iron Warrior's mission of providing "an opportunity for students to practice communication skills in a constructive environment." Coupled with the refreshing of the newspaper's printed image (also designed by Dave), the Iron Warrior is ensuring to renew itself amid the changing world of communication. Now that's something to beat your chest and scream about.

Last Submission Deadline:

March 23 for publication on March 28, 2007

Send your submissions to iwarrior@engmail.uwaterloo.ca

THE IRON WARRIOR

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

MARIA ARSHAD
WEEF DIRECTOR

There is a lot going on with WEEF, so let's get to it.

Firstly an overview of the participation rates:

• First of all I have included the WEEF participation rates for W07. Overall we did well with a participation rate of 73%. In total we had 879 undergraduate students in the Faculty of Engineering apply for a refund.

• The class with highest participation rate is 3A Architecture going at 100%, which is awesome. I congratulate them on that!

• The class that came in second was software with 99% participation rate. Congratulations!!

• The department with highest participation rate is the School of Architecture, Congratulations!

• The department with the second highest participation rate is software. Congratulations!

• I would like to thank everyone who donated! It is with your ongoing support that WEEF is Canada's largest student-run endowment foundation today. A pat on the back for all you awesome people out there!

Moving on to other stuff….

• WEEF AGM is on March 22nd 2007 @ 4:30 pm in the WEEF Lab. You are all welcome to come!! There will be a presentation (25-35 mins) including: an annual report containing the up-to-date financial status; past year's approved Funding Grants, review of past year's participation rates, opportunity for question and feedback etc. Tell your friends about it and bring them too. Looking forward to seeing you all out there.

• The WEEF funding council will be meeting on Tuesday March 13th @ 5:00pm to hear the remaining presentations and on Thursday March 15th @ 5:00pm to decide on the funding allocation.

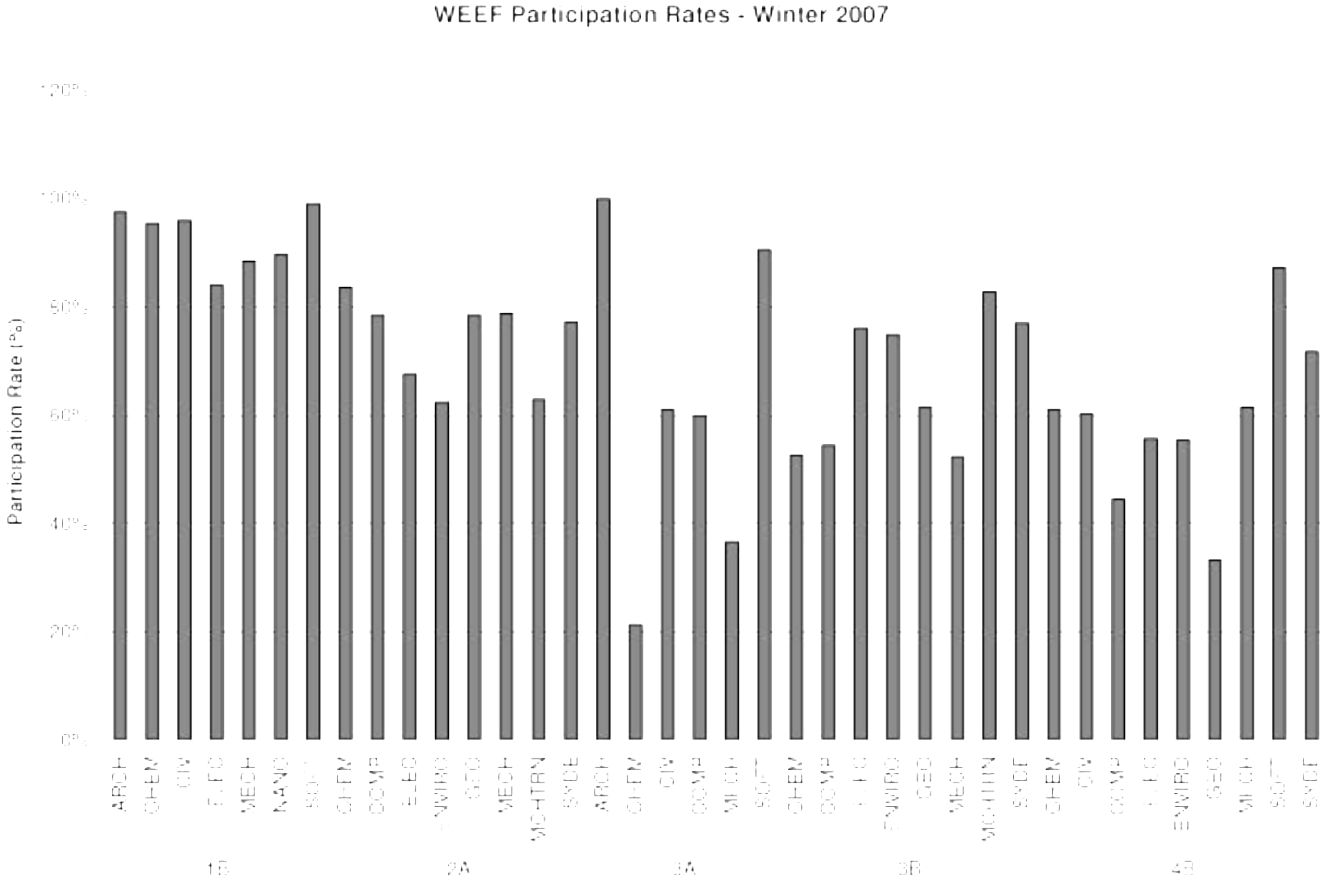
• WEEF Price is Right on March 1st went really well. Participants had lots of fun playing the game and won some cool prizes such as t-shirts, money for watcard, novelties/C&D gift certificates and other cool stuff!

That's it for now. I will include the funding allocation in my next article, so stay tuned!

WEEF is Good!

Participation Rates by Class

Program	Class	Refunds	Class Size	Part. Rate
Architecture	1B	2	84	98%
Architecture	3A	0	63	100%
Architecture	**Total**	**2**	**147**	**98.6%**
Chemical	1B	3	67	96%
Chemical	2A	11	67	84%
Chemical	3A	44	56	21%
Chemical	3B	27	57	53%
Chemical	4B	35	90	61%
Chemical	**Total**	**120**	**337**	**64.4%**
Civil	1B	5	126	96%
Civil	3A	35	90	61%
Civil	4B	29	73	60%
Civil	**Total**	**69**	**289**	**76.1%**
Computer	2A	25	117	79%
Computer	3A	36	90	60%
Computer	3B	35	77	55%
Computer	4B	91	164	45%
Computer	**Total**	**187**	**448**	**58.3%**
Electrical	1B	18	113	84%
Electrical	2A	31	96	68%
Electrical	3B	22	92	76%
Electrical	4B	42	95	56%
Electrical	**Total**	**113**	**396**	**71.5%**
ENVIRO	2A	12	32	63%
ENVIRO	3B	7	28	75%
ENVIRO	4B	16	36	56%
ENVIRO	**Total**	**35**	**96**	**63.5%**
Geological	2A	3	14	79%
Geological	3B	5	13	62%
Geological	4B	6	9	33%
Geological	**Total**	**14**	**36**	**61.1%**
Mechanical	1B	12	104	88%
Mechanical	2A	18	85	79%
Mechanical	3A	50	79	37%
Mechanical	3B	39	82	52%
Mechanical	4B	59	153	61%
Mechanical	**Total**	**178**	**503**	**64.6%**
Mechatronics	2A	40	108	63%
Mechatronics	3B	16	93	83%
Mechatronics	**Total**	**56**	**201**	**72.1%**
Nanotechnology	1B	12	117	90%
Software	1B	1	124	99%
Software	3A	6	64	91%
Software	4B	11	86	87%
Software	**Total**	**18**	**274**	**93.4%**
Systems Design	2A	18	79	77%
Systems Design	3B	19	83	77%
Systems Design	4B	22	78	72%
Systems Design	**Total**	**59**	**240**	**75.4%**
Other		16	132	87.9%
Grand Total		**879**	**3216**	**72.7%**



Feature on Architecture

Continued from pg 1

The School of Architecture used to be part of the Faculty of Engineering until 1969, when it joined the newly established Faculty of Environmental Studies. The return to the Engineering faculty was prompted by a desire to "return to their roots". The move was supported by both the Engineering and Environmental Studies faculty. In a statement by the ES faculty: "While the faculty and staff of the Faculty of Environmental Studies regret that the School of Architecture has made the decision to leave the Faculty, they do not wish to oppose the separation and prolong the instability this action has caused."

Given that they earn a different degree (it's called the Honours Bachelor of Architectural Studies), what do they actually learn in their courses?

Laura Knap (Master's student) - We take a smattering of courses about How the (built) World Was, Is, and May Be. In fourth year, we do a comprehensive building design (architecture, structure, HVAC, building science), which is our big final project.

Sonja Storey-Fleming (3A Class Rep) - In 3A we focus on Design Studio which demands most of our attention, free time, sweat and tears. There is also a strong focus on Iconography which is a cultural history course that is integral to the UW architecture program. We are also studying Lighting and Acoustics, and Structural Systems for Large Buildings, both of which are taught by engineers. There are also electives like Italian (we have 4A studio in Rome), Digital Design and a design-build course called Shed which involves designing and building (woah!) a site materials building and site office (shed) for a Student Co-operative Housing Project called Grand House that is being built in Cambridge by one of our recent grads as part of her Master's Thesis. In fourth year, the year is spent on a comprehensive design project which is done individually. Last year it was the design of a museum in Galt (our part of Cambridge) and involved design as well as costing and a focus on structure and materials etc.

The architecture design studio

What About Co-op?

Architecture students have a co-op program that is similar to the "standard" Engineering program. They too have eight school terms and six study terms, except that they get one summer vacation after first year in there too (I can just picture many engineers turning green with envy at this). There is also an eight month co-op term after 3B.

The Cambridge Campus, And How It Compares To The Waterloo Campus

Laura Knap - I think our building is pretty much as lovely as rumours suggest. Get this: there is natural light. Everywhere. And the windows can be opened to let in fresh air in the summer. Revolutionary, but true. A piece of my heart still pines after the 'loo, but (insert your favourite aphorism about doors closing and opening, the beginnings of things that come with the ends of other things, etc.).

Sonja Storey-Fleming - The current 3A class I am a part of was never on the main campus so it is not really valid for me to compare the two; however, our campus in Cambridge is gorgeous and very convenient, clean, and well-kept. We are very fortunate to have workout facilities, a work shop, a beautiful library, computer and media labs, a photo lab, and our studios all in the same building.

Student Life, and Interaction With Engineering

Architecture students have their own student society, even though they've been becoming more involved in EngSoc. It's called the Waterloo Architecture Student Association (WASA).

Sonja Storey-Fleming - Since our campus is in Cambridge we are very detached from university life and don't really seem to be part of the university at all; however, since joining engineering the social scene seems to be looking up a bit. Although I am sure that there have been many changes in administration, finances etc, and the change that I have noticed first since joining engineering were the invitations that we have received to join engineering events. It is not easy for us to coordinate buses, a time that is mutually convenient for 1a and 3a classes etc so it is tough to get to main campus but we are not giving up. We are hoping to host you guys here at least once this term, so hopefully we can have some inner-faculty interaction!

The social life here is whatever we make. Currently there are only two (rather than 3) undergrad classes in Cambridge right now but since we are so small we get to know one another quite quickly and get to know the Master's students as well. There are often one (and sometimes three) house parties per week (depending on deadlines and multiple birthdays). Every Thursday is traditionally "Walshies night". Walshies is an in-the-basement-off-of-an-alley pool-hall which is stormed by Archies every Thursday for free pool, darts, cheap beer, the jukebox and its colourful owner Ralphie. There is an annual UW architecture pool tournament at Walshies as well. We also love to eat and sing together, last weekend the master's students organized a coffee house to celebrate love, music, coffee, Baileys, Valentine's Day, and the poetry of Tupac Shakur. Our fitness coordinator also organizes fitness and dance classes as well as events like ski-trips, a basket-ball tournament, and beach trips.

69 Love Songs: A recent open mic night

Laura Knap –

Favourite Student Society Event

There is a pretty nice sports court out behind the school. The adjacent river provides a great view and an exciting way to lose basketballs. Sometimes, the court also serves as a surface for construction and installations. The time that I remember it coming most alive was during one sweet afternoon last summer, when we held a barbecue and 3-on-3 basketball tournament, and had some Archie-DJ's spinning on the side.

Favourite Hang

Walshee's is the clear winner. It was about two years ago that one brave Master's student first crossed the threshold from the back-alley parking lot into the mysterious basement pool hall under the Thrift Store. The manager, Ralph, invited us with open arms to share in the dingy atmosphere, retro hard-rock jukebox selections, warped pool cues, mismatched darts, and cheap 50. A great friendship was born. We practice our games hard and hold a tournament at the end of each term; on the other hand, Ralph is often seen around the school and attends student exhibitions.

Favourite Treat

Hot apple dumplings and coffee from the women of the Wesley United Church Apple Corps (thus says their aprons), in the church basement beside the Farmer's Market on Saturday mornings. (What is it with basements?)

Things about Student Life in Galt

It's pretty neat being right in a downtown, as small and economically depressed as it is, because some necessities are conveniently close by, and a lot of other things are entertainingly odd. For me, the biggest treats in town are the galleries - one in the school and one in the library across the street - which hold good, rotating exhibitions. Student life here is very D.I.Y.: there is ostensibly very little "to do" in town but lots of potential to organize things to do. We've struck up a deal with a high school to get gym space after hours, and rent an hour of rink time every week in the winter. Pick-up soccer is a Sunday afternoon standby in the summer. The film club shows flicks every week to make up for the sorry lack of a theatre. And our eclectic-house-party tradition remains strong.

The summer basketball tournament

Acknowledgements

In all of this, I am deeply indebted to the efforts of Laura Knap, Sonja Storey-Fleming, Andrea Hunniford (WASA President), Jen Carroll (EngSoc President) and Melanie Doerig. Without them this feature would not have been possible. I especially admire Laura's and Sonja's responses to my questions, which were of such high quality that I was able to literally copy-and-paste them into some parts, making the process of compiling the article much easier. - *Faraz Syed*

Point vs. Counterpoint

Will Hydrogen Be The Future Economy?

FARAZ SYED
3B CHEMICAL

Lets get the formalities out of the way: oil is running out and people are getting killed fighting over it. Coal is going to blacken our air and the lungs of babies, and run out eventually, meaning we'll need something renewable all over again. In face of all this, what are humans to do?

The answer, is to develop a long-term sustainable energy economy, based on a renewable energy carrier (something that we don't pull out of the ground, so theres no need to fight over it). Hydrogen looks like the best option for this energy-carrier: no country has natural reserves of it, there are a variety of means to generate it and it holds the promise of a pollution free economy.

"Hydrogen looks like the best option for this energy-carrier: no country has natural reserves of it, there are a variety of means to generate it and it holds the promise of a pollution free economy."

The promise I speak of is tempting: if we commit as many resources to this cause as we did for the Space Age, then the ultimate goal is to have renewable energy sources like wind and hydroelectric power extracting hydrogen from water. Then, we all use the hydrogen in our fuel cells, and *poof* out comes clean water again.

It's true that we won't be realizing the Hydrogen Age any time soon. With all the research that needs to be done, it's likely that it will take anywhere from 20 - 40 years to mature and find mass acceptance. One issue holding us back is hydrogen storage. With today's technology we can only store enough hydrogen to drive a car a couple of hundred kilometres. Range is the issue - most gasoline cars can easily do hinges on hydrogen safety. "But I thought hydrogen was dangerous!" The truth is that gasoline is more dangerous to work with than hydrogen. The tanks for hydrogen are built so that they can withstand dynamite and shotguns, whereas the best gasoline tank is a flimsy tub in comparison. A hydrogen leak means a stream of gas that quickly dissipates, whereas a gasoline leak means an inferno pooling under your car - giving you one minute to run for your life.

So what else do we need to fix before we realize the future? The cost of fuel cells, for one thing, is still prohibitive. Currently this technology is only accessible to large corporations or student research teams such as our very own University of Waterloo Alternative Fuels Team (UWAFT). However, research into lowering the cost and improving the lifespan of fuel cells is promising. Many research groups across North America, Germany and Japan are focusing on replacing expensive materials used in fuel cells, like platinum, with cheaper materials. The goal of many such agencies is to bring the cost of a fuel cell engine into the range of $3,000 to $6,000 - making it cheap enough to make it a part of all cars.

In the end, despite all the obstacles, the whole debate keeps coming back to the simple question: "do we want an oil-free, pollution-free future based on hydrogen?" The answer is a resounding yes. How can we not hope for this? We may not get there in a couple of years, and no one is delusional enough to think this, but in the long run this is sometime that would be beneficial for every person that depends on gasoline and energy. We just have to have the will to struggle through the obstacles and get there.

AMANDA GRUBB
3B CHEMICAL

Energy is one of the most valuable assets to a society, and although I believe that we need to look for alternative sources, I don't think that hydrogen is the one and only answer.

Let's take a closer look at why fuel cells, in particular hydrogen propelled fuel cells are not going to be implemented any time soon. One thing everyone can agree with is that it won't be cheap. Hydrogen makes $2/L gas look cheap, and some experts are estimating that it will cost around $2 just to deliver the equivalent of one liter of gas in hydrogen. Not to mention the infrastructure that must be set up to deliver the fuel, and the cost of replacing virtually all of our current vehicles. Just to note, the current fuel cell cars out there have an estimated value of over a million dollars. Allowing for a substantial decrease from that cost, a car puts a large dent in the average persons wallet now, can we expect everyone in the near future to just decide they need a new one?

"Nearly all hydrogen today comes by reforming, which uses natural gas. A bit of a contradiction for something that is suppose to be reducing the emissions of CO2. Mind you the emission are only about half of those of a normal gasoline engine, but is that worth the effort?"

There are many other issues with hydrogen as well. Nearly all hydrogen today comes by reforming, which uses natural gas. A bit of a contradiction for something that is suppose to be reducing the emissions of CO2. Mind you the emission are only about half of those of a normal gasoline engine, but is that worth the effort? There is the option of producing it from electrolysis, but this requires a large amount of electricity, which largely comes from coal burning power plants, which again produces greenhouse gases. Solar power is being looked at to solve this issue, but if solar power isn't taking off with our wide use of electricity now, what makes us think that our society will embrace it if fuel cells come into the main stream?

So say as a society we get past the above conundrums, we would still have to deal with issues including safe handling of the highly flammable product, the costly parts and the lack of durability of current fuel cells, the heat produced, and the public anxiety about the technology.

As far as sociological impact, fuel cells have also the potential as any new technology to widen a growing gap between the fortunate and the poor. This expensive technology is something we are looking at putting into the life of the every day person. If we change the fueling stations to hydrogen in the future, are we going to say that it is socially unacceptable to drive an 'environmentally-unfriendly' gasoline car? If so, what happens to those working poor families, who normally would buy a 10-20 year old car and cannot afford to make the change?

On the other side of things, for those out there that will squirm at any mention of the oil industry. The major oil companies are not the bad guys in the energy debate. If you don't feel a sense of guilt filling up your car with that great old gasoline, then you really don't have any right to throw stones. In fact, many of them are looking at alternative sources for energy. I know first hand that at many oil and gas well sites throughout Alberta, solar panels are used to power pumps, instruments, and other required equipment. This is more than can be said for a large number of other industries.

It should also be noted that major use for the tar sands that come out of the Cold Lake operations in Alberta is asphalt, so unless we are going to be building roads out of nice clean bubbles of hydrogen, we may still need that resource.

For those that say the current energy industry should be looking at alternatives sources to work with once oil becomes depleted, they are. Both Shell and BP have established core hydrogen divisions within their companies. ExxonMobil is teaming up with GM and Toyota to develop fuel cells. Texaco has become a major investor in hydrogen storage technology.

Complex problems require elaborate solutions. We are not going to be able to find a simple substitute for the large source of energy we currently use. Although hydrogen is in my opinion not the only solution, I think it will play an important role in our future. I think the best test of character for our society; will not be if we can switch to a more environmentally friendly fuel on a dime, but if we can address the issue of our energy overconsumption. Take a bus, ride a bike, walk, live a little closer to work, turn the lights out and the heat down when you leave the house. Do something instead of yelling at the oil companies, and saying that hydrogen will save us all!

P.E.T.s Will Protect Privacy With Technology

Continued from page 1

So, after much planning on the part of a few dedicated students in Engineering and Math, Dr. Ann Cavoukian spoke to an audience of about 100 students in the Theatre of the Arts over lunch hour on February 27. First she talked about what privacy is, what the Office of the Information and Privacy Commissioner does, some of the powers the Commissioner has and the differences between privacy and security. She stressed the importance of having both privacy and security in our society. We were encouraged to have the mindset that technologies can be built with both components. Second, she discussed something called "Fair Information Practices" which is basically guidelines and policy on information and privacy protection. Dr. Cavoukian then explained an idea that until recently was thought to be slightly backwards. She named this idea "PETs" or "Privacy Enhancing Technologies". When first presented back in the late 1990s, most people felt that technology was making privacy more difficult to protect and were rather pessimistic about how successful technology could be to enhance privacy. However, today there are several companies using technology to protect the privacy of customers. Some of the technologies discussed included instant messaging, RFID tags and Elliptical Curve Cryptography (ECC). Then Dr. Cavoukian explained the "7 Privacy – Embedded Laws" followed by a discussion on a biometrics solution to encryption.

Following the talk, a few of the student organizers had the pleasure of eating lunch with the Commissioner to talk more about her work, her life and some of the projects she's been a part of. Overall, the event was quite successful. There were a few people who significantly helped with the planning for this event and should be thanked, namely Prof. Ken McKay and Sabine Kawalec. Thank you to all the sponsors of the event (EngSoc, MathSoc, WIE, Department of Management Sciences, Faculty of Engineering and Faculty of Math). For those who were unable to attend the talk but are still interested in the presentation slides, please email me at asoc_prez@engmail.uwaterloo.ca.

Privacy Commissioner Ann Cavoukian spoke about Privacy Enhancing Technologies.

ENGINEERING SOCIETY EXECUTIVE REPORTS

Constitutional Amendments Galore!

JEN CARROLL
PRESIDENT

As many of you are aware, this term we've been working towards a couple of constitutional amendments for the good old EngSoc constitution. I wanted to use my exec report this issue to explain the motivation behind the amendments and talk a bit about how you can help them pass or fail at Joint Council (where both Society B and Society A are present) in the Spring term.

Motion #1: Change the constitution so we can change the constitution (more easily):

The current EngSoc constitution is difficult to make amendments to because of the procedure that must be followed when making said amendments. The amendments must be presented to both Societies prior to Joint Council and then a vote is taken at Joint Council as to whether the amendment passes or fails.

The problem with this is two-fold. First, Joint Council doesn't always have the attendance it needs to pass motions, and second, amendments need to be planned eight months in advance in order to be presented. The amendment we're proposing is to make it such that if an amendment is proposed by one Society, it can be voted

upon by that Society and passed. In the term immediately following, the other Society must also pass the same exact amendment for it to come into effect - at that point, the constitution will be amended with no need to have a vote at Joint Council.

The exec feel that this amendment still protects the constitution from being changed without due thought but it also makes it easier for changes to be implemented and thus will keep the society moving forward.\

Motion #2: Making friends with EWB and WASA:

The Waterloo Architecture Students Association (WASA) and Engineers Without Borders (EWB) are both large organizations with which EngSoc has relationships. This

amendment is intended to formalize these relationships slightly and ensure that they continue in the future. In the case of WASA, Architecture students are members of the Faculty of Engineering, but their fees go to WASA, not EngSoc. In the spirit of making them feel welcome in their own faculty, we have put forward the motion that WASA Exec are welcome to attend EngSoc meetings to give reports and Architecture students are welcome at EngSoc events. Throughout all three versions of this amendment, this has remained the same.

In the case of EWB, they are a national organization with a Waterloo chapter that EngSoc has strong ties to, due to the fact that many of our members are also EWB members. For the past several semesters, EWB has been given an EngSoc budget for photocopying. Someone from EWB also often reports at EngSoc meetings. The purpose of including them in the constitution is really an act of good faith towards this national organization through its Waterloo chapter.

In the first version of the amendment, EWB is given the opportunity to apply for an EngSoc budget officially and it is stated that the two organizations will encourage members to attend each other's events. In the second version of the amendment, it only states that the organizations will encourage members to attend each other's events. In the last version of the amendment, EWB is not included. The Exec understand that it seems that EWB is being singled out of all of the Engineering student groups. The main differences are that EWB is a national organization and that EWB and EngSoc have already unofficially formed a relationship in the form of the first amendment. The purpose of including them in the constitution is merely to recognize the relationship and ensure it continues in the future with different Exec.

I know that was a bit of a lengthy discussion on the amendments. If you would like to get a copy of them, please email me at bsoc_prez@engmail. They have already been sent over the EngSoc mailing list.

Now, for how to vote on them:

A-Soc will be presenting the motions to their council in the Spring term. Once they are presented to both Societies they can be voted on at Joint Council. It is crucial that we have quorum at this summer's Joint Council meeting, so please begin discussing with your classmates now to see if there is anyone from your class who can make it to Waterloo for a meeting (this nearly always happens on the same weekend as the Frosh Leader Retreat, so keep that in mind). If there is absolutely no one around, your class will be able to proxy your vote to another class. Instructions will be sent out over the summer to explain how to do that. Basically, your class will decide how it wants to vote on each of the amendments and you will tell another class (who will be attending Joint Council) how to vote. You will then need to contact the Joint Council Speaker to inform them of the proxy. As I said, exact details will be sent out over the summer, so if you aren't a member of the EngSoc B mailing list yet, you should subscribe by sending an email to engsoc_b_general-subscribe@yahoogroups.com. This way, you can make sure that you have all the information you need to make sure your class is represented at Joint Council.

Thanks for taking the time to read, folks!

The Latest from External Land

GREG FITZGERALD
VP EXTERNAL

Hi everybody! Here's the latest from VPX land.

CEC:

The Canadian Engineering Competition (CEC) recently took place. Congratulations to our Parliamentary Debate team (Mike Spendlove, Yannik Thomas) and Junior Design Team (Howie Lau, Marcus Pyo, Lu Dong and Josh MacCaull) who represented Waterloo after successfully placing 2nd and 3rd at the Ontario Engineering Competition. Check out the next issue of The Iron Warrior for the results of our teams at CEC.

Mmm...piiiie...

It is currently Pi Day! What is Pi Day, you ask? Well, it's the 14th day of the 3rd month of the year. Being that we're engineers and don't need to know pi to more than two decimal places, that means that in 'month.day' form, today is 3.14, or if you will, the exact value of Pi. Look out for pie fundraisers, organized by Ryan Harris, where you can direct a pi to someone's face for a set amount of money, or redirect the pie for a higher

bid.

Bus Push:

If you were roaming the streets of Waterloo on Saturday morning you may have noticed some dedicated engineers pulling a bus from UW Campus to Kitchener City Hall. Thanks to Adam Schubert, Richard Winograd and Peter Szabo who organized this fundraiser for the Heart and Stroke foundation, proving that engineers not only rule the world, but are also very strong.

And the moral of this article? Allow me to consult the Wheel of Morality. Wheel of Morality, turn, turn, turn - tell us the lesson that we should learn.\

"My pants just went on a wild rampage through a Long Island Bowling Alley!!"

That's it! This article's over. Why are you still reading? Seriously. Move

along folks - there's nothing to see here...

Pancakes vs. Politics vs. Performance

ADAM NEALE
VP EDUCATION

What a whirlwind of events that have been taking place over the past few days! Balls were dodged, true genius was displayed at the bowl of Genius', formality was kept to a semi yet fully awesome state, by the time that this article is printed hunters will have scavenged all across the galaxy, a play will have been ENGed at a level of 80%, a bus will be pushed (or maybe even pulled) into the heart of Kitchener, and who knows someone somewhere might even get some school work done. A big thanks/shoutout goes to all of those directors involved with all of these great events. It is really awesome to see all of your great work pay off into really cool, really fun, super awesome events.

In addition to all of this awesomeness of awesome, the nomination period of the Engineering Society executive elections are now closed. Be sure to check out the elections section of the paper to see all of the great people running for each position. It's going to be an exciting next couple of weeks as campaigns are run, classrooms are visited, and final voting takes place on Thursday March 22. That's right, THURSDAY MARCH 22ND is the big election day, so be sure to come out and rock the vote with a big X, check mark, or filled in circle to support the candidates of your choice. The voting station will be open from 8:30am until 4:30pm in the CPH foyer. A pancake breakfast will be served in the morning so that you can get your fill of short stacks and political goodness, and the election results will be announced that night at TALENG in Los POETS PUBE. Good times will be had by all, so be sure to get some pancakes, get your vote on, and then rock out at TALENG all taking place on THURSDAY, MARCH 22ND.

Donations in, 19 days left of being Exec!

CHRIS OLEKAS
VP FINANCE

Well, this will be my second last exec report EVER! Tis been 16 months of ups and downs but everyone came out ahead. This past weekend your exec put in a SCUNT team and I am currently writing this article while listening to Avril Lavigne's Girlfriend. The music video portrays a story of a nice girl with a fine boy. The nice girl is played by Avril. This perfectly 50's couple (the girl with the ankle high plaid skirt) and the rebel boyfriend.

The lyrics of the song tell a story of an equally rebelous young woman (played by Avril). The video depicts various scenes at the local pitch n' putt where the rebel Avril continuously puts down the nice Avril. This putting down of the nice Avril comes in the way of hitting a golf ball at nice Avril's head, running nice Avril off a go-kart course, interrupting a nice photo-op in a photo booth. Listening to the lyrics and watching the video is kind of interesting. I don't listen to Avril very often but the subject matter is very mature and unexpected from the Canadian native. Oh, and I'm writing this article during Scunt, so its coherence is not guranteed. On the novelty front, we successfully alloted $2500 to over 11 teams (or maybe 12). The table below indicates the allocation. If you haven't received your money please contact me asap. On another topic, there's a new magical trevor out. Its by far the worst out of the series. And yet another thought that popped into my head, this term's EngPlay was particularly excellent. I don't know when I've last laughed as hard as I did at the play. The theme of the play was witty and mature and had a effective mix of coloured language and sexuality to make the play fresh feeling. Ok, I'll stop. I don't really have anything planned to write about next article, so if you want my insight on a certain topic I welcome suggestions.

ENGINEERING SOCIETY 'B' WINTER 07 DONATION AMOUNTS

Team	Amount Requested	Amount Allocated
NextGen	$500.00	$375.00
EWB	$300.00	$150.00
Gradcomm07	$500.00	$300.00
CEC	$400.00	$325.00
GNCTR08	$570.00	$275.00
UWSpaceSoc	$475.00	$50.00
Midnight Sun	$250.00	$200.00
Wombat	$800.00	$250.00
Auto-Guided Robot	$187.17	$50.00
EMBS	$750.00	$200.00
ENGFOC 07	$500.00	$325.00
TOTAL	$5,232.17	$2,500.00

Debt Load Surveys and Course Critiques

MARK TRUCHANOWICZ
VP EDUCATION

Well here we are, right at the beginning of EngSoc's month of crazy awesome events and more. I hope that many of you have gotten a chance to come out and check out some of the great events that have passed and plan on attended upcoming events, they're going to be off-the-hook.

Anyways, right now there's two main "surveys" being conducted by the Faculty. First there's the Debt Load Surveys, a completely voluntary and anonymous survey conducted by the Dean's Office to poll the undergraduate student body for information regarding the financial status of its students. The information that you provide back to the Dean helps him and the faculty make accurate representations to internal and external decision making bodies regarding our cost of living and the debt, if any, that we've accumulated throughout our time here. I'm hoping that this term we can all work together and get an even better turnout that last term. This is our chance to speak up and let the Dean know how tuition increases will affect us and more. For those classes that have already completed the surveys I send out my thanks. But if your class hasn't done them yet take a minute to swing by the EngSoc Office and pick up the Debt Load Survey package for your class. Remember, Debt Load Surveys are due back in the EngSoc Office by THIS FRIDAY, MARCH 16TH!

Next, as I'm sure some of you have already done them, it's Course Critique season. So once again it is our chance to speak up on the quality of both professors and courses, and the feedback is very much appreciated by the Faculty. Completed course critiques can also be submitted in the EngSoc Office. Keep an eye out for emails from the Course Critique directors for when the Course Critique Reading Party will take place, it's always a blast and I'm sure there will be some free food.

Lastly, be sure to check out the candidate profiles for everyone running in the EngSoc election in this issue. Read his/her profile and platform and be sure to check out the candidate forum later on in the campaign for your chance to grill the candidates with your own questions. So remember, get informed and be sure to vote in the upcoming EngSoc election!

Bus Push Success!

ADAM SCHUBERT
BUS PUSH DIRECTOR 1/4

Saturday, March 10th, one week after it was originally scheduled, the bus push wreaked havoc on the streets of Waterloo for the 31st straight year. The volunteers, most of them tired from staying up overnight from the SCavengerHUNT were enthusiastic till the end.

In the end, approximately $2000 was raised for the Heart and Stroke foundation. The two people that collected the most money were Erica Waugh and Ruth-Anne Vanderwater. Despite not causing any car accidents this year, I think it could still be considered a successful day. Kudos to the Engineering Society for sponsoring the event, and to Mary Bland for continuing to kick ass.

Although the bus that showed up wasn't the one we had been told we would show up (which made securing the rope to it a nightmare) and although our police escorts were about an hour late, thanks go out to the GRT and the Waterloo Police aswell.

Peter Szabo, Brandon Tulloch, Richard Winograd and I, Adam Schubert, are greatful for the opportunity to help out in organizing the activity. If you were a part of the bus push this year, I would encourage you to continue to support great charitable causes (such as the cancer fundraiser coming up) and get people excited for another run next year!

Upcoming Events from EngSoc

Sun Mar 11	**Mon Mar 12** EngSoc Election Campaigns Begin	**Tues Mar 13** 11:30 IW Meeting WEEF Presentation Meeting	**Wed Mar 14** 5:30 EngSoc Meeting 5	**Thurs Mar 15** 5:00 WEEF Funding Council Meeting	**Fri Mar 16**	**Sat Mar 17** St. Patrick's Day	**Check out up-to-the-day event postings on the EngSoc website at** **engsoc.uwaterloo.ca**
Sun Mar 18	**Mon Mar 19**	**Tues Mar 20** 11:30 IW Meeting	**Wed Mar 21**	**Thurs Mar 22** EngSoc Elections WEEF AGM TalEng	**Fri Mar 23** Food Drive Jazz Concert	**Sat Mar 24** GradBall	
Sun Mar 25	**Mon Mar 26**	**Tues Mar 27** 11:30 IW Meeting	**Wed Mar 28** 5:30 EngSoc Meeting 6	**Thurs Mar 29**	**Fri Mar 30** EOT	**Sat Mar 31**	

Your 2007 Engineering

Valerie Pearce
Presidential Candidate

For those who do not already know me, my name is Valerie Pearce and I am running for President of the Engineering Society (EngSoc). Currently I am in 3A Civil Engineering and will be graduating with my fellow comrades in 2009. As an active member of EngSoc since my 1A term, I have held many directorships and supported EngSoc events and services either as a participant or volunteer. I have held different directorships throughout my time from POETS Manager to Women in Engineering, P**5 to EngPlay Producer, successfully manning the positions during the academic terms. But, instead of living in the past, I want to concentrate on the future, what I can do for you and the Engineering undergraduate student body if I am elected as the next President.

As leader of the EngSoc, I will be dedicated and work hard towards maintaining the caliber of events and services run by the society. I will work with the other Executives and Directors to review the successes and failures of events in the past to improve on them for the future. The archived feedback forms completed by Directors each term will be summarized into quick action item lists that will be easily accessible and updated to hold current information.

As the liaison of EngSoc with other student societies I will work together with the Interfaculty Relations Director to develop a relationship with other societies. By inviting other societies, it will diversify the participants at events run by EngSoc and create relationships with students outside of Engineering. If elected President, I will work with other student societies to gain knowledge from their experiences to improve events and services run by EngSoc.

If elected as President, I will work to effectively communicate the activities of the society. One action item will be to create a weekly 'Poster Run' that will remove all obsolete and unauthorized posters from the Engineering buildings. To advertise events effectively, only current posters should be displayed to draw attention to the current and upcoming events.

Overall, I want to be President to represent you, the engineering undergraduate student body to the faculty, the university and to the engineering community. I will tirelessly work to improve communication within the society, whether just between executive members or from the society to the student body, communication is necessary for the success of all activities. As president and your connection to faculty administration I will always keep the society's best interest at heart.

If you like innovative ideas and a driven leader, vote for Valerie Pearce on March 22, 2007 for President of the Engineering Society.

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Amanda Hoff
Presidential Candidate

For those of you who don't know me, my name is Amanda "Don't Hassle the" Hoff, and I'm super-excited at the prospect of becoming your next Engineering Society president!

What qualifies me for the position?

I've been a director since 1A and held a total of 23 directorships. A few things I've accomplished so far are bringing back the Task Team from certain death, establishing a link between Career Services and EngSoc to enhance our resume critiques, and replacing Campus Pizza at Course Critiques last Fall with a gourmet meal involving caviar. I also initiated the PDEng Rep council - a fully student-driven but faculty-supported initiative to provide a stronger student voice in the development and refinement of the PDEng program – last year and have been working on improving it ever since

In addition to directorships, I have been a Huge for frosh week twice, and an EngSoc delegate at 3 recent conferences.

Enough about me! What could I do for the Society as President?

As you can see, I love EngSoc. But that doesn't mean we can't do better!

I want to raise the public image of the Engineering Society by increasing the awareness of charity and community events we do within the Society, University, and Kitchener-Waterloo community. I believe that through more media exposure and direct networking with the community - like getting the Imprint and Record to cover more of our events, or getting local companies more involved in our charity outreach - we can effectively improve the reputation of the Society as a whole.

EngSoc has many awesome internal events. Unfortunately, some of these events, such as the Scavenger Hunt and Enginuity, have been gradually declining in popularity. There was a day when these events were "kind of a big deal". What happened? The reality of the situation is EngSoc is evolving. We need to continue to evolve along with it, or the Society as a whole will fall victim to the same decline. I would like to examine some of these "dying" events and introduce new initiatives to revive them, or reduce their frequency. Rather than trying really hard to run a semi-successful event every term, we could instead run it only once a year but concentrate our efforts to make it even more amazing. I also want to introduce new events or initiatives as driven by the students to cater to the personality of the evolving Society. For example, many people I've talked to have expressed interest in renting out the ice at CIF for "EngSoc hockey time".

I not only really want to win this election, but I also want to be the best candidate for the position, and that involves getting as much feedback from you, the Society members, as possible. If you have any questions, suggestions, or just want to talk, feel free to stop me in the halls or send me an e-mail, and I'll do whatever I can to help you out!

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Peter Mottola
VP Internal Candidate

Hi, I'm Peter Mottola. You may remember me from such directorships as "POETS Programmer", "Semiformal" and "Class Rep Advisor". But today I am going to talk to you about something much more important – the future. The Engineering Society is in a good position in terms of internal events. These events are always well organized, have high participation and are constantly undergoing innovation. However, just like anything else there is always room for improvement.

In order to assure future participation, we need to make sure incoming frosh get involved early in their academic career. EngSoc should be more heavily promoted during orientation week to let the frosh know exactly what EngSoc can offer them. If services and events can be brought to their attention early, then there would be a higher likelihood that the frosh will take advantage of them. Also, class visits within the first couple weeks of class would be a good way of making EngSoc visible and would act as another venue to inform frosh of what EngSoc can offer them.

In order to further increase participation in events, we need to expand our methods of advertising them. Posters, emails and EngSoc meetings advertise to the same people who already know about EngSoc events. The newly instituted IW advertising is a great new way to pump up events. Also, the "Event-A-Tron 2006" outside of the C&D is another way to break out of the traditional methods of event advertising. These new methods need to be implemented more often and we need to continue to do more "outside the box" advertising.

Another way to advertise to more people is to attempt to include Architecture in more of our events. I feel that our relationship with Architecture should be strengthened since they are a part of our faculty. I personally see Architecture as a sort of grey area since they are now part of our faculty, but they are still an external society. There should be stronger communication with the Architecture executives, internally, so that both societies can benefit from each other and our relationship can become more defined. We should begin to advertise more of our events in Cambridge and welcome advertisement of Architecture events here in Waterloo. This would not only increase participation in events, but would increase the number of events available to participate in.

As Vice President Internal I will make sure that the next 16 months are the best they can possibly be. I will work hard to ensure that you can play hard. I've been to pretty much every event so I know how they should run, what works, what doesn't, and how to maximize awesomeness. Make sure to come out on March 22 and vote Peter Mottola for VP-I!

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Cat Hay
VP Internal Candidate

We're all members of the Engineering Society here at UW, and yet I keep hearing students say they are turned off by EngSoc because they think it's cliquey or it's just a bunch of friends getting drunk together. I find that disturbing since I look at EngSoc and see a fantastic group of students who put a lot of time and energy into organizing fun events like Enginuity, TalEng, and Genius Bowl, among other things.

During my term as VP Internal, I want to expose the Engineering Society to all our students. I plan to focus on finding better ways to reach out to students – whether these be class visits, walking billboards, or something entirely different. Throughout my campaign I will try to implement some of these techniques to show you what I mean by looking outside our usual way of doing things.

If elected VP Internal, my primary goal is to get more students involved in the Society. I plan to focus on directorships like athletics, darkroom, extreme sports, and special events which appeal to students who aren't as interested in all of the more popular directorships. I want to really highlight events that do not focus on drinking, like EngPlay and Semi Formal, so we can attract students who are underage or simply not interested in drinking every other weekend.

I hope to promote directorships as a way for new students to get involved with the society, gain leadership experience, and plan the events you want to see happen. We have a ton of cool directorships right now, but a lot of them are run and attended by the same group of people. By getting more students to run directorships, we will get some really unique events and we will open up the Society to even more students!

As you may have seen from my posters, I have a lot of leadership experience and an extreme passion for organization. You've seen me at work organizing the first EngSoc skydiving trip, the Student Life 101 Extreme Engineering Showcase, bringing back our semi formal, and putting together Women in Engineering events. I was a huge in the 2006 frosh week and I've been the class rep for Systems 2010 for three terms in a row now.

What you haven't seen are all the activities I've done outside of school. I was the Junior Branch Chair of Children's International Summer Villages for two years and on its executive for many more. I planned really cool events like an overnight cookie-baking fundraiser, two weekend camps, and biweekly activities for children 10-25 about various cultural issues. I have also been chair of the RIM Co-op Social Committee twice now where I organized biweekly social events and a weekly lecture series.

I am very hardworking and extremely dedicated to the projects I take on. With your support, I would love to be VP Internal for the Engineering Society Executive of 2007-2008.

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Continued on Next Page

Society B Executive Candidates

Continued from Last Page

Dan Taylor
VP External Candidate

Hello everyone! My name is Dan Taylor and I'm running for the position of EngSoc VP External. I am in 2A Computer Engineering and I've been involved in EngSoc since my first weeks of school in 1A! EngSoc has done many great things for our faculty and university, and will continue to do so in the future. With me as your VP External, we can continue uphold the legacy of UW engineers and move forward, not only on our own campus, but also in the Waterloo community and across Ontario.

As engineering students at the University of Waterloo, we are aware of our school's tradition of academic excellence and our vibrant campus community. During my term as VP External, I will work to improve UW's image externally and continue to build relationships with other universities in Ontario. My experience attending conferences such as ESSCO AGM, as well as volunteering for the FYIC conference here at Waterloo has given me the opportunity to build relationships with Engineering Societies from universities across Ontario. I believe there is a lot to learn from, as well as share with, other universities.

There are many fantastic people to meet and new ideas to be tapped and I believe that ignoring this rich resource will hinder our development and image going forward. It is important that here at Waterloo we take a look at other schools' ideas and actively see what could work for us.

As VP External, I will develop and strengthen EngSoc's relationship with other faculties by organizing cross-faculty events. Other schools such as McMaster already do this through events such as their popular Engineering and Nursing parties. I will encourage the Arts, AHS, Science, ES, and Math student societies to work with EngSoc in hosting such events. I will also work with directors to involve other UW faculties in other EngSoc activities such as attending EngPlay and participating in SCUNT.

I will also work to improve Waterloo's image in attracting new students to the school. EngSoc hosts events such as Shadow Day that bring prospective engineering students to Waterloo to experience "a day in the life". While this is an effective way in enticing students who are already considering engineering, there is a need to send engineers from Waterloo to local high schools to talk to senior students about Engineering and their choices for post-secondary education.

Despite recent efforts, the number of females enrolling in engineering is declining. I will ensure that Women In Engineering (WIE) is active in reaching out to prospective female engineers. I will also advocate for an increased spirit of volunteerism in the local Waterloo community. It is important that as part of our time at UW, we give back to the community where we have lived and studied over the course of our five years of school.

Thanks for considering me for VP External and remember to come out and vote on March 22nd!

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Erica Waugh
VP External Candidate

Hi y'all, my name is Erica Waugh and I am running for VP External! I am a 3A Civil Engineering student and I have been very active in EngSoc since my 1B term. If elected to this position, I would like to pursue the following initiatives:

- Media Director: I feel this position has not been used to its fullest potential. I think instead of having each media-worthy event organizer contact the media, there should be only one contact. This keeps things simple and develops relationships with local media – what better way to do this than by giving this task to the media director!

- ESSCO/CFES: I would like to see more involvement and awareness on the larger events run by these organizations, such as National Engineering Week and Complementary Education Courses.

- Stronger relationships with other faculties: interfaculty relations are weak. We have events like DUSTED that are always more fun with more people so why not invite other faculties. I would accomplish this by being in communication with the other faculties, trading event schedules and invitations.

A few reasons why I'm a good candidate for this position:

- I was on the CFES council as Charities Commissioner for the 2006 term. I gained extensive knowledge of this council and how it works, and developed a solid working relationship with the members. I feel that this is a very large part of being VPEX and I feel that my experience here is an asset to this position.

- I was Charities Director for three terms, where I developed very good knowledge of running large scale events and getting people involved

- I've attended many conferences in the past including CFES Congress, PEO Conference, and FYIC

-I'm an active participant in all things EngSoc (Attending meetings and events on a regular basis). Also very familiar with the structure, which makes for a much shorter learning curve.

- I'm VERY energetic!

Please feel free to email me (erwaugh@engmail) if you have any questions about what I've written here or about anything else!! Don't forget to come out and vote on March 22nd in the CPH Foyer!

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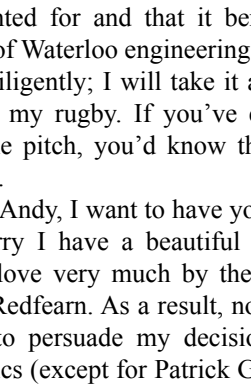
Andy Reitzel
VP Finance Candidate



Hi fellow engineers; my name is Andy Reitzel. You may remember me from such political campaigns as "Jean Chrétien, why do you talk so funny" and "Paul Martin, you make a better finance minister than a prime minister" I have made it my intention to run for VP Finance.

"Hey Andy, why do you want to run for EngSoc?" Good question anonymous bystander. Throughout most of my adult life, I have been very critical of individuals who make decisions that affect me, so I figure, instead of complaining, why not do something about it.

"Hey Andy, what makes you qualified to be VP Finance?" Wow, another great question. First off, I worked at McDonalds for six years, two of which were spent as management; I was responsible for counting thousands of dollars to make sure the safe and tills were balanced. I have also been an outstanding student athlete, playing rugby and maintaining an above 80 average.

"Hey Andy, What do you bring to the table?" Man, you guys ask some pretty tuff questions, but here we go. I am a very strong believer in accountability. As VP Finance, I will break legs, figuratively of course, to make sure every penny spent is accounted for and that it benefits the students of Waterloo engineering. I will do my job diligently; I will take it as serious as I take my rugby. If you've ever seen me on the pitch, you'd know that I play for keeps.

"Hey Andy, I want to have your baby." LOL, sorry I have a beautiful girlfriend whom I love very much by the name of Melissa Redfearn. As a result, no one will be able to persuade my decisions using sexy tactics (except for Patrick Gillis).

Thank you for taking the time to read my little blurb, Just know that when you vote for Andy, you are not just voting for a charming, good looking, rugby player, you are voting for someone who will give it their all to ensure the job gets done.

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EngSoc Executive Candidate Profiles

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Chris Jamieson
VP Finance Candidate

Hello, my name is Chris Jamieson and I am running for the Engineering Society executive position of Vice President Finance. I believe that I have the right combination of experience and drive to not only succeed, but excel and this position.

The question though is quite obviously: why should you vote for me?

First off let's start with experience. For the past 2 academic terms I have been the Engineering Society Finance Director which has had me working in conjunction with the current VPF, Chris Olekas. This experience has given me a great deal of exposure into the ins and outs of the position and from this I believe that I have a solid grasp on the responsibilities. Furthermore, in my current position as Engineering FOC (Faculty Orientation Committee) I have been given the specific responsibility of the Engineering budget. This has given me on going experience balancing a budget within the Federation of Students system. I strongly believe that this experience makes me the ideal candidate for this position.

Secondly, let's talk about my plan. Through my work with the current VPF as finance director I have been leading the development of a Point of Sale system for Novelties. Together, Chris and I designed it with the forethought and idea that once the POS was completed, the system could be easily expanded to include a website where both students and alumni could order Novelties and have them delivered. If elected I intend to continue this initiative and see it through to completion. The introduction of online Novelties will transform and better Novelties. It will be much easier to determine what items the shop carries and students will not be held to a schedule of when they would like to purchase items. I believe that my heavy involvement in the project thus far puts me in the perfect position to continue the work of Chris as your Vice President of Finance.

If you have any question or would just like to talk feel free to email me at ctjamies@engmail.uwaterloo.ca and don't forget to GET OUT AND VOTE!

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Patt Gillis
VP Education Candidate

Got Cakes?

My name is Patt (Cakes) Gillis and I want to be YOUR next VP Education. Over my three years as an Engineering Undergrad at UW I have had the opportunity to be both an active member of EngSoc and of course a struggling student just like everyone else. I think I am the right person to represent you as VP Ed over the next 16 months and this is why:

PDEng Sucks. But it's here to stay so we better get over it. As a new and evolving program it's important to criticize it, but to criticize it constructively. As VP Ed it would be a goal of mine to help build PD Eng and ensure it is in fact meeting its objective of being a tool to help students in the workplace instead of just another hindrance on our already overwhelming schedules. As the first B-Soc VP Ed to have actually participated in the PD Eng Program, I plan to provide a unique view on the program to the PD Eng Steering Committee, and a strong student voice.

At the Co-op Students Council I will bring engineering issues to the forefront. With 100% of engineering students being in co-op these are issues that affect all of us. I plan to hold co-op accountable to ensure that we are getting our money's worth out of our co-op fee.

I plan to hold public forums to gauge student opinions regarding academic issues so I will be able to accurately represent engineering students' best interest at the Senate Undergraduate Council. I will raise the academic issues that you, the engineering students at the University of Waterloo, have. I will ensure that the council is aware of the student's interest and will make certain that informed decisions are made.

I will promote the exam bank and encourage the submission of new exams so future years can benefit. I plan to work with faculty to enhance the reliability of the exam bank and solution sets. Also by working with faculty, I plan to update the exams to account for curriculum changes so that only applicable exams will be included. By updating the online exam bank to include all of the current applicable hard copies I will also make it more convenient and accessible.

Finally I plan to make myself as visible as possible. I will make myself accountable to you, and will not lose sight that it is my duty first and foremost to serve the engineering students. The Engineering Society is made up of students and is meant to be a service for the students. As VP Ed I would support the other EngSoc Executive and would work with them to ensure that we provide to you the very best EngSoc possible.

On Thursday March 22nd be sure to come out and vote Patt Gillis for VP Ed.

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Ari Taub
VP Education Candidate

First off, allow me to say that I feel privileged to have the opportunity to run for the position of Vice President Education. I will be even more honoured should I be elected. So, why should you, the soon-to-be-informed EngSoc member, vote for me? The answer is a combination of my experience and involvement in many academic initiatives that affect Engineering students as well as my promise to use my experiences to improve the quality of your education.

For the past year I have been a PDEng class representative and an active member of the PDEng student council. I have been working closely with the council as well as PDEng administration to create a system of course critiques and mentor evaluations in the hopes of discovering ways to improve the course and the way it is implemented. As VP-Ed, I would vow to continue working towards this goal and use my position on the PDEng Steering Committee to advance and accelerate current efforts as much as possible. It is my personal goal to bring PDEng to a level of mutual understanding between faculty and students with minimal animosity felt on either side.

More recently, I have been representing EngSoc on academic issues as the Engineering representative on the Federation of Students' Co-operative Student Council (CSC) for this term. I have been attending monthly meetings to discuss issues that affect co-op students in all faculties. The issues discussed at CSC meetings affect the vast majority of engineering students so I have been doing my part to make sure that the "Engineering perspective" has been voiced clearly. If elected, I will continue to attend all CSC meetings and I promise to continue to present our concerns to the council so that CECS can act accordingly.

Most importantly, I promise to use my power in the office of VP-Ed to make a difference on issues that already affect students or any issues that are yet to arise. For example, the recent change in the university's exam scheduling policy has caused many engineering classes to have final exams scheduled consecutively, whereas in past this was always avoided. It will obviously take a long time and much persuasion for a complete reversal of the new policy, but I will do my best to do so or at the very least find a compromise that would improve our chances for reasonable exam schedules.

Once again, I feel that I have the necessary experience for this position. Furthermore, I promise to devote an increasing amount of my time and effort into academic issues within EngSoc. If you have any questions for me about my campaign or current involvement as outlined above, please give me a shout. (ataub@engmail.uwaterloo.ca)

See you on the 22nd!

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Mathieu Poirier
WEEF Director Candidate

Hey Everyone,

My name's Mathieu Poirier, I'm in 3A Mechanical, and I'd like to be your WEEF Director for the next two terms.

I'm qualified for this position because I've been involved with WEEF since 1B. For the past two terms, I've been the Assistant Director, working closely with the Director, Maria Arshad, on various WEEF related events (refunds, meetings, etc). I know what it takes to do the job.

As Director, I would ensure the smooth daily operation of WEEF, while also trying to increase awareness of what the foundation does for you. There are various projects that are partially complete (such as updating the website), that I would finish. I would also increase awareness by working with both student teams and professors/TAs to better show what it is WEEF is doing for you. I would also continue to have regular office hours, as Maria has begun this term, as it facilitates communication between WEEF and others.

Thanks for reading, and on Thursday, March 22nd, come out and vote!

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Alexandre James
WEEF Director Candidate

Hello my fellow engineering students. My name is Alexandre James and I am in 3A Comp. I hope to be your next WEEF Director.

Why? Because I believe WEEF is one of the reasons the engineering undergraduate program here at Waterloo is one of the leading programs in the country. I have always had a great appreciation of how WEEF grants students the power to give funding where it is most needed. I find it amazing that every term $80 000 is put in the hands of students. In my past two terms as WEEF assistant I have enjoyed being a part of it and have learned a lot not just about WEEF but about student life here at Waterloo.

What? What do I plan to do when elected WEEF director? I would like to raise WEEF awareness, specifically in first year classes, by heavily publicizing WEEF during events such as frosh week and asking professors and lab instructors that are benefiting from WEEF to openly promote it in the classroom. I believe that it is important for students to know how WEEF contributes to the faculty so that they can appreciate to what level it increases the learning experience here at Waterloo. I would like to make students aware of how easy it is to put forth a proposal. I often hear a lot of students complain "The computers in that lab are so bad". As WEEF director I would encourage these students to put together a valid proposal and offer them guidance so that their proposals are met.

How? How will I implement all these plans? I will use the help of the WEEF assistants efficiently by giving them each a specific task to undertake over the term. I will use the help of WEEF class representatives to communicate to the entire faculty. But most importantly I will allow myself to be easily reachable and will gladly listen to any comment people have about WEEF, positive or not.

When you are voting March 22nd vote Alex, because we all know WEEF is GOOD, now help me make it GREAT.

Alexandre James
ajames@engmail.uwaterloo.ca

Remember to vote on March 22nd in the CPH Foyer.

Canaries in the JobMine

A Look at Co-op Over The Years

DAN ARNOTT
3B ENVIORMENTAL

So one day a few of us were sitting around the office of The Iron Warrior and reminiscing. Those of us in 3B in 4-stream were in the process of ranking the employers for what was to be our last co-op job. One John Olaveson (a real old-timer) was about to graduate and look for a real job. Pretty soon, the co-op memories started to flow. Remember the days before the Tatham Centre? The resume bins in Needless Hell? The student riots of the Fall 2003 term? Most people reading this article won't.

We realized that if we didn't set down the history of co-op at the University of Waterloo, all our trials and tribulations would be lost to the tides of history when we graduated. Soon, the last students to remember Needles Hall will pass from our ranks. The act of physically depositing resumes into bins will be forgotten. We at The Iron Warrior do not intend to let this happen. Nay, we delved even further back into the history of co-op, so that the struggles of students like us should not be forgotten.

Janet Metz was kind enough to grant an interview, and provided a brief history of the progression of the co-op process at UW. Before there were resume bins, before there was JobMine, there were the Want Ads. A newspaper would be published and distributed among Math and Engineering students, in which employers would post the positions they wanted filled. The papers would be distributed on a Friday, and over the weekend, students would take a look at the jobs they wanted. The following Monday, they would submit a sheet which indicated their top 15 choices of jobs, along with one copy of their resume. Co-op would then photocopy and package each student's resume and send it to each of the 15 employers selected. This process took about two weeks, and had to be discontinued due to huge budgeting problems.

In the early 1990s, the bulletin-board/resume-bin system was introduced. All jobs would be posted on a bulletin board in Needless Hell along with a bin number. Students would read the jobs, select which ones they wanted, and photocopy their own resume packages to distribute in numbered bins, one corresponding to each employer. These bins resemble those into which we deposit our assignments today. At night, a gnomish army of high-school students would empty the bins, and sort and package the resumes. This system was much less expensive, but also resulted in crowding of bulletin boards and bin rooms, and if the photocopier wasn't working when you needed to copy your package, well, woe to you.

When CECS moved from Needless Hell to the Tatham Centre, the bulletin-board/bin system was retained for one term before the switch to an electronic system called ACCESS (so you could access job postings online, but resume packages still had to be dropped in the bins). At the close of the first posting at 8:00pm one fateful night in Fall 2003, the doors of the TC were locked and an army of angry last-minute students was shut outside. Tempers escalated; the students felt they were being cheated out of opportunities, and attempted to take the TC by force. Campus security was called and the mob was dispersed before any Molotov Cocktails could be flung, but I still remember the angry shouts on that fateful night.

Things have been better since the introduction of JobMine, although deadlines and periodic shutdowns are still a problem. But co-op has weathered changes before. In the early 1990s, a recession struck, doing away with many manufacturing jobs (yes, there was a recession before the one where all the high-tech companies went under). Rob 'Rocky' Kurcz (Geo '96) recalls a work term he spent with CECS in those days, doing job-development work and hoping to coax employers to create some of the jobs we now enjoy today.

"The staff called me Rocky. I'm guessing it was because I was Geo. Janet Metz, I believe, started it." The job included creating scripts to read to potential employers over the phone, actually making the phone calls, and a variety of other duties as required. The co-op department was ostensibly more fun in those days than it is now." Rob recounted some memories: "I hit on a thirty something girl who worked in the back full time... I struck out hard. The receptionist, possibly named Janet too, had a wicked natural perm... she was a lot of fun." Also doing job development with Rob were an English and Philosophy student named Dan, and Civil Engineer and CFL player Taly Williams. Rob recalls his co-workers: "The flowering long haired grunge rocker (me), the poet and the jock. An extremely unlikely trio, but none the less some lasting memories."

Many of us may not want to retain any memories of our co-op experiences, but Janet Metz reminds us that once we graduate, CECS still provides career counselling and full-time job postings for all former co-op students. Few students know about this, much less take advantage of it. Seems to me like a good way to get the most out of your co-op fees.

Who knows what the future of co-op will be? Psychological profiling and job-match by DNA? The important thing to remember as the years roll on is that co-op is a living, breathing animal. Sometimes a trusty docile puppy dog, sometimes a rabid hyena with serious halitosis. But like most animals, don't poke it with a stick and it'll treat you fine.

The Perils of Being Gimpy on Campus

JENN BLACK
4B CIVIL

Pull up a chair and have a listen to my sad story. About a month ago, on a particularly icy day, I happened to slip and dislocate my kneecap. To make a long story short, there was a lot of pain and now (hopefully temporarily) I have a bit of a limp due to the fact that I can't really bend my knee. Presently, not being fully able-bodied, I am finding it a bit difficult to get around on campus.

You've probably noticed that whenever it snows, UW campus seems to be cleared of snow before the rest of the city. It's a wonder we ever get snow days let alone two and a half this term alone! But good luck getting onto campus! Olympic level hurdlers would have a difficult time leaping over the fortification-like snow banks barring your access to on-campus walkways. Single shoe-width cut outs through the snow walls mark the most traveled paths. Imagine trying to traverse this veritable obstacle course with a one leg handicap.

This snow removal regime is all well and good if it happens to snow on a weekday when snow removal personnel are ready to leap into action at the sight of the first snowflake fluttering it's seemingly harmless way to the group, but snow that accumulates over the weekend has a nasty habit of turning into something a little more solid by Monday morning. The solution? An overdose of de-icing salts. This is especially prevalent on and at the bottom of stairs. I don't know if I'd rather deal with the ice or attempt to get a foothold in the gravel-like de-icing salts; actually, I think both are equally dangerous.

Unfortunately, no matter how early in the day you clear the snow, a healthy amount of the ever treacherous slush accumulates throughout the day. Personally, I find the slush much more dangerous than just plain snow; it's more slippery and clings to the bottom of your shoes. Not only treacherous but also very crafty, the slush hitches a ride on your shoes in the hopes of giving unsuspecting indoor victims the slip as well.

So now inside, after having tackled the snow, ice, de-icing salts, and slush, there should be no obstacles, right? I've heard tell of mythical objects called elevators but the quest to seek them out is long and arduous. Sure, every level of every building IS accessible via elevator but using them is another thing. In lieu of taking the stairs, you instead get to go (limping) five minutes out of your way – up to 10 minutes if you want to avoid going to the precarious outside again – to use an elevator. So why not just weather the stairs?

In addition to all these snow woes, there is also the dilemma of the go-go nature of Waterloo-ites. It's not as bad as say New York but people here always seem to be in a rush! Even with two fully functional legs I sometimes have a hard time keeping up. Now I'm even slower and feeling the pressure to pick up the pace! I'm ever fearful that I'm going to be "accidentally" pushed down the stairs as I'm taking them one at a time and a gigantic line is forming behind me.

With spring finally (hopefully) on the way I am looking forward to seasonal barrier-free travel around campus but winter will rear its ugly head again next year and I wish you all the best of luck in the UW Winter Obstacle Course Extraordinaire.

SCALA Teaches Computing Skills to Filipino Youth

KEN CHAN
1B NANOTECHNOLOGY

Engineers Without Borders (EWB) is looking for computers to help drive the Scala Computer Livelihood Training Program, an award-winning youth employment project in the Philippines. EWB is an organization of 20,000 members across Canada which promotes human development through access to technology.

Scala is a multi award-winning program based in the Philippines, which educates underprivileged youth in areas such as computer literacy, entrepreneur training and life skills. To share this opportunity with more Filipino youth, EWB and our Filipino partner have planned training centres for 7 new communities in 2007. Our team will be shipping the donated computers off to these 7 new Scala centres across the Philippines.

Currently each of the Computer Livelihood Training Centres trains on average 90 youths per year; however, there are a significant number of youth on the waiting list. The newly donated computers will aid in decreasing this number through the opening of new centres. With the addition of 7 new centres we hope to increase the capacity of Scala by 630 students trained per year.

As of October 2005, the Scala program itself has had itself a completion rate of 93%, with 23% of the graduates finding employment and another 26% returning to formal education. Those who do not find employment or return to formal education still benefit greatly – all the youth leave the classroom with new friends, new role models, and a stronger support network in society.

The completion statistics and the large waiting list prove that this program is highly popular amongst the Filipino population, but the reason for this popularity is also supplemented by affordable training fees. To compare, a specialized IT school costs 2000 PHP, while Scala costs 150 PHP per student. With average Filipino family savings of only 1 700 PHP a month, and even less for lower-income families, high costs prevent easy accessibility to these specialized IT schools based on costs alone. Scala makes this education affordable.

In previous years, our chapter has sent Junior Fellow Megan Campbell and Ginny Li overseas to aid in the development of the program, in addition to sending numerous computers and financial resources. For the current phase of the program - to aid in the opening of 7 new centres, EWB Waterloo is committed to raising 130 computer donations by the end of March 2007.

We are particularly seeking computers with minimum requirements of 450 MHz, 128 MB memory, 2 GB hard drives, preferably network card, as well as peripherals such as monitors, keyboards, mice, etc. EWB is a registered Canadian charity and can provide tax receipts for donations of over $20 in value. Cash donations are acceptable as well.

For more details, questions, and donations, please contact Ken at wk3chan@engmail.uwaterloo.ca.

Sarah Whetham, 1988-2007

MATTHEW BESTER, CAITLIN HO, LAURA SISSON, TIFFANY TERRIER
1B MECHANICAL

As some of you probably know, our class (1B Mechanical) recently suffered a great loss. A member of our class, Sarah Whetham, passed away unexpectedly on February 11, 2007. We wanted to write this article to share a little bit about the type of person she was and a couple fond memories that we shared in our short time together.

Sarah was the kind of student who always sat in the front row and actively participated in class. At first we all thought that she was the type to lock herself in her room after class and slave over recommended problems, but we soon realized that this wasn't true. Although Sarah took her education quite seriously, and was impressively on top of almost all her work (unlike 95% of us), she had so many interests and hobbies. Sarah loved the outdoors and was a very active person. She was often seen biking around campus or working out at the gym. She loved to read and somehow actually made time for leisure reading amidst her busy schedule. Her passion for music was also apparent with her active participation in jazz band.

One of the best memories that we have of Sarah was the night of Fall 2006 TalEng. The Jazz Band was performing that night, and Sarah, being a member, was present for the event. A bunch of us were planning on going to our weekly cheap wing night at Molly Blooms before the talent show, so we invited her to come along and were pleasantly surprised when she agreed. As we gnawed through our messy chicken wings and drank our pints of beer, Sarah sat there happily sipping a glass of water and eating her caesar salad. We then headed over to Caesar Martini's for the highly anticipated talent show. All of us crowded around in a group of comfy chairs in the corner, enjoying the atmosphere while little Sarah snuck away. She returned with a banana ice cream crepe that could feed a small country for a week. There was not a crumb left on the plate when she was through. Shocked and amused, we returned to watching the show. The next time we came back, the first sight we saw was Sarah, sitting there in Caesar's, reading out of her physics textbook. Her reply to our inquiries about it was "Well, I need to stay on top of things somehow!"

Another fond memory that I have while sharing time with Sarah was during A-Soc Engineering Jazz Band (Speed of Sound) rehearsal back in 1A. She played the Clarinet and was somehow grouped into the Trumpet section along with another fellow Clarineteer. One of the pieces that we were working on, specifically "The Incredibles", was a particularly difficult piece with many time changes and tricky rhythms. Since she had previously played this piece before from her high school days, she had little difficulty sight-reading the piece on her clarinet. We traded various comments and rants about how we REALLY, REALLY needed a conductor to keep everyone in time! (Sorry Ally!) Also, we shared many random conversations ranging from flying squirrels to chocolate fondue to Kenny G in between pieces during practice. She always brightened my gloomy 8:30 morning's everyday and she was a very talented musician.

-Caitlin Ho

Words cannot describe most of the moments and memories that we had with Sarah, but one thing is for sure, she will be deeply missed. There is an empty place in our class that will never be filled and we will always remember her.

A Radical Change in Locale, Temperature, and Context

My Co-op Term in Austin, TX

STEPHEN J. WALTERS
2T COMPUTER

For you, today is probably a cold day. A number of reports of snow and ice and radical mercurial contraction in Waterloo have been transmitted to me and have affected several belly laughs, schadenfreude at its sweetest. You see, I am roughly 2583 clicks southwest of Waterloo, in Austin, Texas, watching the sun descend through my window which was opened a few hours ago to let the cool, dry breeze in, without a thought or care about snow and ice and frozen locks on cars. Earlier today the temperature rose to 28 Celsius. Please note that I have stayed sane and not began using the indefensible Fahrenheit scale, and that I ate two Freezies today.

Upon arrival, I was not prepared for any sort of cultural differences beyond "y'all" and more than the usual amount of pickup trucks. I figured Canadian television had inculcated American culture in me well enough that I'd barely notice the change and spend a carefree term building a base tan for summer in Waterloo. This may have been the grossest miscalculation of my entire life. Texas - and perhaps the entirety of the USA, but I can't be certain as I've never been to any other states - and Ontario are disparate to a great degree.

The first major difference between Austin and Waterloo that I noticed was the lack of diversity. On a brief stroll around Waterloo in autumn, there is more contrast between the colours of skin than leaves. In Waterloo, there are people of many different ethnic backgrounds, while in Texas there are Texans and Mexicans -- and the Mexicans work almost exclusively blue-collar jobs, a socio-economic reality of Green Card-less immigrants. Variety being the spice of life, Texas is culturally bland and in need of a greater variety of flavours.

On a less negative note, I'd like to report that Texas has got it going on in the highway department. Ontario's highways are all built on the ground with overpasses staggered about a click apart. In Texas, they build up, bringing the cars and traffic closer to the sky which makes the surrounding area seem less cluttered. Texan highways aren't the eyesore Ontarian ones are, and the lack of any real weather in Texas means they stay in good shape for longer, so road crews are less common.

On the highways in Texas are trucks and SUVs. Small, efficient cars here are observed about as frequently as neutrinos, with most Texans opting for larger, less fuel-efficient monsters. This may be caused by the relative cheapness of gasoline here, which is roughly 62 Canadian cents for a litre (though they dole out gas here by the "gallon", a ridiculous, non-SI unit which is not well-suited for conversion into another unit).

In terms of communication, a Canadian has a steep learning-curve for acclimating himself to the unique brand of Southern English spoken in Texas. "You guys" instead of "y'all" will yield ascending eyebrows and scorn. "Eh" will be mocked. "House" and any words with the trailing "ou" monophthong are frighteningly pronounced, and the smoother Canadian equivalent is apparently hilarious. In terms of vernacular, you don't go to "university" even if you're attending the University of Texas. Instead, you go to "college". And it's not "first year, second year, third year, fourth year," but rather "freshman, sophomore, junior, senior". Asking for a "Coke" here will usually lead to the question "What kind?" as "coke" is used to refer to all pop in general. And calling it "pop" is like calling a couch a chesterfield. Even at this point, two months in, I'm still adjusting to the Texan vernacular and usage, and I'm having a difficult time saying "y'all" without smirking.

Food in Texas is mostly the same as in Canada, though with a few serious omissions. Poutine is not available anywhere, and inquiries about availability bring laughter or confusion ("Poo-teen? Y'all're tryna pull my chain, arn'tcha?"). There are about six hundred varieties of Doritos but no ketchup or all-dressed chips, and grocery store clerks respond to ketchup-chip questioning with a mixture of revulsion and fear. Steaks in Texas are serious business. They are large and delicious and the cooking of steaks is a matter of almost religious zealotry. Beer in Texas is cheap -- a big plus for this student -- but it is also watery and terrible. Citrus fruits are very inexpensive. Something called "grits" is served at breakfast, and it is an unholy abomination of corn processed into pure squishy evil.

Additionally, there are many small peculiarities about Texas that I find either endearing or annoying, but usually the former. Bike lanes in Austin often end while the road continues, which makes for a dicey move into traffic, and biking in general happens mostly for recreation than actual transport (it is, after all, the place Tour de France legend Lance Armstrong calls home). College sports are *huge* - unlike at UW where most students are apathetic towards the varsity teams, most University of Texas or Texas A&M (and indeed most other colleges in the States) students are at least somewhat informed on the goings on in terms of their school's athletic endeavours, and many are rabid, face-painting, witty-sign-making fanatics.

What I have experienced here in Austin is not what I would classify as "culture shock". I was not shocked, was not stricken wordless and slack-jawed, but rather I would say I suffered "culture surprise": I did not expect this - this is different from what the ideas in my head had suggested it would be. Though culturally surprising, Austin is a great place to live. It is the sixteenth largest city in the USA, having a population of over 690,000. That is a good size.

Puff… puff…

Just don't pass the pain or suffering

ANDY DANIELS
1N CHEMICAL

Recently on campus, there's been a movement started to not renew our contract with Coke on campus, and to change companies. The reason: allegations that Coca-Cola mistreats workers, and might even be implicated in murders of people attempting in any way to set up unions in poorer countries where Coke is produced. I've heard some people saying things like 'damned hippies' on hearing such news, and that made me think. When I think of hippies, free love and pot from the 70s is what comes to mind. If it is hippies, or to be specific pot smokers who are opposing Coke, is that not hugely hypocritical?

Why would that be hypocritical? Well, I'm not against helping out people in other countries who live in deplorable situations, but to speak out against that while enjoying a joint in private company is a true sign of lack of character and conviction. They speak out against Coke abusing third world people, and yet to get their hit of pot, they directly harm countless Canadians. Do you remember the four RCMP officers who were shot and killed in Alberta during a drug raid not so long ago? Last December in Calgary, six children had to be taken from their parents because they were living in grow-op houses. It's estimated that 10-15% of grow-ops house children, harming them with the chemicals and conditions needed to grow marijuana, and putting them at risk to the violence of the gangs most often in control of these grow ops. In 2002, 1500 grow-ops were dismantled in Ontario, putting 150 families of children at danger, and it's likely that those 1500 were nowhere near the full total for the province. Countless more are put into danger by the lethal booby traps that can be found in grow-ops, or when the grow ops are hidden, like the 22 apartments in a 13-storey building recently dismantled in Toronto. Even the mould caused by these grow ops can be a hidden and deadly danger to future owners. Despite all this, somehow countless people make the choice to look the other way.

I suppose that the reason people can protest Coke and smoke pot could be because they can get Pepsi or plenty of other similar drinks without any guilt attached, but as far as pot goes, there is no other source than but to hurt their fellow Canadians physically, not to mention the huge economic costs associated with the illegal activity, well into the billions of dollars here in Canada. But why can't people choose to be responsible, and find the right way to do things? For those opposed to marijuana, increased fines and jail time seem to be the answer, but what is left for the rest of the population who doesn't see pot in the same harsh light?

To them, I would suggest biting the bullet and making the illegal drug trade less financially enticing and profitable. Yes, it's obvious from saying this that I myself have never and will never puff the magic dragon, but don't tune me out just yet; there are indeed options open to the supporters of pot. Start thinking about what would be needed to end the harm caused by their current method of getting high. Quite simply, only some form of legalization is the answer, which is music to certain people's ears, I'm sure. To legalize marijuana is a much more intensive task than just to demand that it happen. For starters, a completely thorough and trustworthy study must be done into marijuana to ascertain how harmful it is. Despite being touted as less harmful than tobacco, a joint a day will not keep the doctor away. What can we engineers do? One of the critical systems needed for marijuana legalization is a breathalyser the way we have with alcohol, so that impaired driving can be caught easily and effectively. Yes, weed does impair your driving; it's not called a depressant for nothing. Some foolish people think that it increases their focus, but in fact that is a false assumption made due to the lack of perception to dangers, the drastically impaired reaction time, and the

inability to focus all granted by pot. People I know tell me quite clearly, they smoke a joint every now and then to escape reality, which indeed does put you at risk as a driver.

Ok, now you've found out that marijuana is safe enough to use, and you can catch it with a breathalyser as easily as you'd catch a drunk. You still have to tackle the bigger issue. A reason alcohol can be accepted is because when you go drinking with friends, their drinking doesn't get you drunk; you can easily stay sober and unaffected by not drinking. But pot is not like that. In a car, one person, be it driver or passenger, can start to hot-box the car enough that nobody in it would be immune to the effect. Second hand pot quite simply does impair. Your task as a pot aficionado: find a way that can allow you to enjoy your high while I enjoy my fresh air and clarity of mind. I'm no supporter of pot, but if it can be proven that it is not exceedingly dangerous and can be enjoyed while not putting those around you at risk, or making yourself a risk to those around you, if its abuse can be quickly, simply and effectively determined, and if it can be kept so that only you are enjoying, suffering from and being impaired by your joint when you are smoking it, then positive change could be realized. If you can take up the challenge and the hard work, you could go from harming countless people and lives and looking the other way, to complaining that the government's pot taxes are too high. When we're all back to respecting and safeguarding each other, and complaining about this tax and that tax, that's when you really know that everything is good and well.

A Global Perspective: From Science to Business

YVONNE LAE
SCIENCE AND BUSINESS STUDENTS ASSOCIATION

What? A Global Perspective: From Science to Business

Where? Davis Centre, UW Campus

When? March 17th, 2007, 9:00 a.m. - 4:30 p.m.

Who? Students, Faculty, and Industry Professionals

Why? To learn about being competitive in the global economy

Register online at: www.uwsbsa.ca/conference

SBSA is proud to present this year's fourth annual conference "A Global Perspective: From Science to Business". Come out to this FREE conference to get some exposure to the world out there-globally! Breakfast and lunch will be served so hurry and register online to let us know that you're coming!

The Science and Business Students' Association (SBSA) is a student-run organization representing students in Science and Business, Biotech CA, and Biotech Econ programs at the University of Waterloo. Each and every year, SBSA holds one of the largest conferences right here on campus. For the past three years, SBSA has successfully organized three annual conferences: "Intellectual Property: From Science to Business," "Keys for Success: From Science to Business," and "The Driving Force: From Science to Business."

This year's fourth annual conference is focused on the theme of Globalization. There is so much going on in the global economy surrounding us, markets have become more competitive, regulated, and democratic. This has truly evolved exciting new ways of managing business in our world today.

This year's conference aims to provide awareness of upcoming issues that business leaders will have to face in tomorrow's navigational global economy. In addition, this conference will provide tools for working in emerging competitive markets and becoming tomorrow's top business leaders and managers. The conference will discuss strategy, human dynamics, academic opportunities, managing and expanding operations globally, and will feature case studies on entrepreneurship and business law.

The SBSA team has been working very hard to make this the greatest conference to date. We are looking forward to see you at the conference! Registration is mandatory at: www.uwsbsa.ca/conference.

UW Engineering Alumni Gather in Toronto

HAROUT MANOUGIAN
3B ELECTRICAL

On March 1, 2007, in the Fairmont Royal York Hotel in downtown Toronto, UW Engineering held its official 50th Anniversary celebration. The black tie gala event was attended by more than 300 alumni, faculty, students and friends of the university. Although, a blistering storm of snow and freezing rain, which shut down campus for a day and a half, caused a busload of attendees from Waterloo to arrive late, all were impressed with the showcase of student vehicle-design teams and the caliber of the speakers throughout the evening.

The current Dean, Adel Sedra, unveiled the plans of the newest engineering buildings that will be built as part of the Vision 2010 plan to increase faculty and graduate students. Two of the buildings will be built across the railroad tracks on Parking Lot B and a third whose location on campus is to be determined. The addition of 400,000 square feet, which does not include the Nano building slated for the Biology green, will expand the Faculty's space by 50%. The buildings on Parking Lot B will be connected to Engineering 3 by bridging over the railroad tracks and Ring Road. Two thirds of the first floor will be devoted to space for the student teams such as WOMBAT, WARG, Formula SAE, UWAFT, and Midnight Sun. In fact, all the money raised during the banquet was allocated to the teams.

The highlight of the evening was the keynote speech delivered by Chris Hadfield, the Canadian astronaut who conducted post-graduate research at Waterloo in the 1980s. He described how Canada was the third country to send up a satellite, after the USSR and the USA. Canadians main ticket to space was the development of the Canadarm and Canadarm 2, made possible by the collaboration of Canadian engineers from across the country. SciSat, a satellite used for ozone research, was developed with UW support.

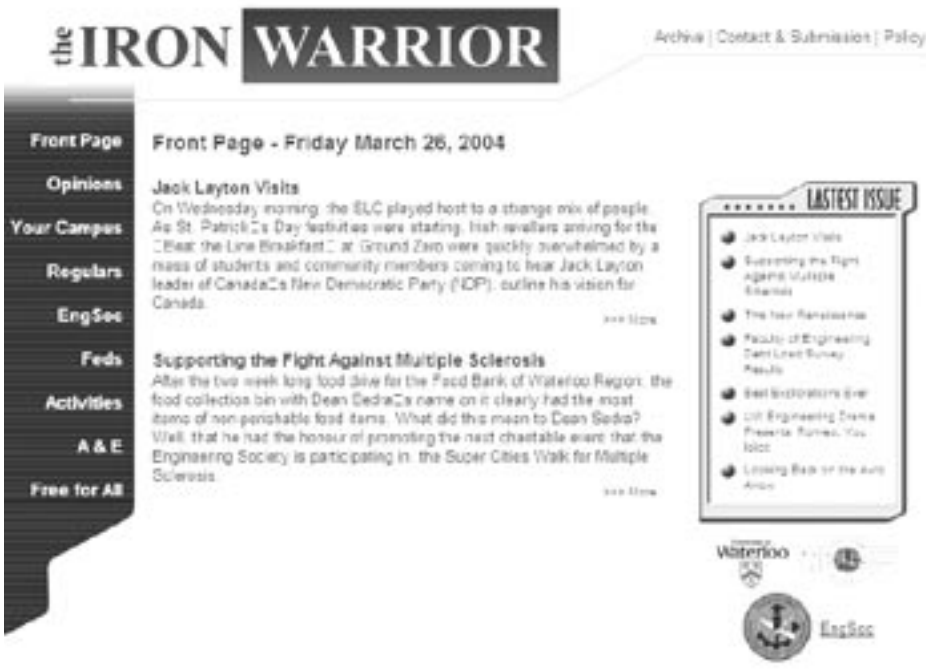
Hadfield discussed his childhood dream of going into space and how it was realized in 1995 aboard the Space Shuttle Atlantis. Hadfield flew as the first Canadian mission specialist, the first Canadian to operate the Canadarm in orbit, and the only Canadian to ever board the Russian Space Station Mir. In 2001, as he installed the Canadarm2, he also became the first Canadian to ever leave a spacecraft and float freely in space. "It is so much fun to be weightless," he commented and was also continually humbled by the majestic view out the window. With the advent of digital cameras, "The last guy that went up took 74,000 pictures."

Near the end of the presentation, Hadfield explained how it was inevitable for Earth to be hit by an asteroid eventually. "We'll get hit again. The reason the dinosaurs are dead is that they didn't have a space program." He also showed photographic evidence of a liquid gushing out of a crater on Mars.

The main sponsors of the event were RIM, Brock Solutions, and SNC-Lavalin.

From left to right: Jay Howard and Alan Plumtree (Mechanical Engineering Professors), Peter Watson (Civil '68, PhD '71), Peter Guest (Mechanical '66) and his wife, Cheryl.

The Iron Warrior Gets Online Makeover



The old look of The Iron Warrior online.

The new look of The Iron Warrior online, designed by David Yip.

BAHMAN HADJI
3T COMPUTER

As you've probably noticed, your Engineering Society newspaper got a whole new look earlier this term, courtesy of a new banner designed by former Editor-In-Chief David Yip. This had been in the works for quite some time. There was some initial debate as to whether a change was even necessary, but after Jaclyn Sharpe (Fall '06 Editor-In-Chief) did some research and found that the masthead of *The Iron Warrior* had changed several times over its 27-year history (the last time being in the year 2000), the change was approved by the Advisory Board. The new banner, the 10th in the history of the newspaper, paved the way for the launch of the massive overhaul to the website that Dave had been planning.

The Iron Warrior uses a content management system (CMS) to manage and publish its material online. There are a variety of content management systems, which generally fall into two categories. There are systems such as PROPS (The Iron Warrior's current CMS) that publish the material in a news-style format, with the option of displaying multiple headlines from different sections on the front page and rating the stories by importance and relevance. Alternatively, there are systems that display all the stories in a given section in a blog-style list format with less refined editorial control, and allow for users to comment on and rate the stories (an example of this type of CMS is Mambo, which *Imprint* uses). When discussion of a revamp of the website came about, there was some talk about possibly changing the CMS to the other type due to its aforementioned forum-oriented features. But ultimately, it was decided that, in addition to the advantage of retaining the online archives, the editorial control and headline-oriented nature of PROPS worked better for the online version of this newspaper.

As for the look and feel of the new website, Dave says that he went for a more muted and plain look that would age better, given that it may again take several years for another change to come about. The previous design, in contrast to this one, was very colourful and clearly did not age gracefully as the Internet age advanced. It also did not take advantage of several features that PROPS offers, and used the default settings for every page, essentially looking more like the blog-style system. The new website, though, uses a custom front page design that prominently displays the masthead in the centre. It is also laid out on a virtual white page against a dark background and displays the most important front page story with a picture, giving it the recognizable feel of a real newspaper.

The new design also lays out the different sections of the newspaper in a table format and displays headlines from each section, giving the reader an "at a glance" overview of the whole issue and making the site much more accessible. Also, the PDF version of the newest issue and a picture of its front page are now prominently placed in the right sidebar of the entire website.

In addition to having a more attractive and accessible interface, the new website also has some added features. The most important one is the generation of an RSS (Rich Site Summary) feed, which can be found in the right sidebar of the website below the PDF link. The RSS feed is a link that contains a summary of every story in the current issue of the online version of the newspaper, to which users can subscribe. This allows them to be notified when there are new stories added to the website (or, to be more precise, when a new edition is published). It also lets them read the stories with a news reader – without even having to visit the website.

Finally, there are some more minor additions, such as an integrated Google Custom Search, which you can use to search through the online archives. The Policy Manual and Advertising Rate Card of *The Iron Warrior* are also linked to from the left sidebar of the website, making it easy for potential advertisers to locate the advertising rates and publication dates. As well, the current staff list is now online, along with a list of the past Editors-In-Chief.

The previous nine banners that The Iron Warrior has used since its inception in 1980.

Systems Design Coffee House

Apple Crumble voted most Beautiful Woman in all of Systems Design

JEFF KAO
3B SYSTEMS DESIGN

The termly Systems Design Coffee House was held on March 6th at the Bomber with proceeds going to the Canadian Cancer Society. Comparable to a rare alignment of three celestial bodies (a syzygy, for those of you who didn't make it out to Genius Bowl), three generations of Systems Design classes were on stream to support and organize the event. BlindSYDEd (SYDE '07), 08SYS (SYDE '08) and In10SYDEe (SYDE '10) put on a great show for all attending, including Systems Design grad students, and co-op students as well. No Systems professors were present, but considering the racy content of this version of the Systems Design Coffee House, this was likely for the best! This was the 6th Coffeehouse for BlindSYDEd, the 5th for 08SYS and the 3rd for In10SYDEe.

There were a huge variety and range of acts to suit all tastes and great performances to entertain the crowd. There was some hilarious stand-up comedy, a talented illusionist, polished musical acts, dances ranging from classical Indian dance and music to Vanilla Ice, a one-man-skit, and some amazing films including a music video featuring the hit song "Systems Rap".

The highlight of the evening was the memorable First Annual Miss Systems Design Pageant, which pitted contestants against each other to vie for the crown of "Most Beautiful Man-Woman in all of Systems Design." In the tradition of other beauty pageants, there were two portions to the contest: the Modeling component to judge the contestant's physical beauty, and the Judge's Questions component which was essential for determining the contestant's inner qualities. Unfortunately, the swimsuit competition was cut out, likely due to scheduling or censorship restrictions.

There were certain moments during the contest where the competition and desire to win among the contestants was so intense that the crowd was brought to fits of howling laughter and tears over what the contestants were willing to do to win over the judges and win the audiences' votes. Desirée the glamour model was one such example, notable for the two fur coats that he wore: the long white coat, which,

Continued on Page 16

Arts & Entertainment

Engineering Jazz Band Charity Gig

ALLY CHAN
3B CHEMICAL

With Respect to Time (WRTT), better known as the Engineering Jazz Band has been together since the Winter of 2005 on B-soc. WRTT is currently a twenty-five piece band with members from all over the engineering spectrum, from first years to fourth years, to Nanotechnology to Physics (honourary engineer!). We rehearse weekly on Sunday nights for about 2 - 2.5 hours with an hour sectional during the week.

In the busy life of an engineer, it's often hard to remember the things and extras that make life enjoyable. Music is a very large part in many people's lives, and without even realizing it, it is often shoved down on the priority list with assignments, quizzes, midterms, and oh boy, final exams. The engienering jazz band allows engineers to continue playing music in a relaxed envrionment with the liberty to interpret the music themselves.

No auditions were, or have ever been held because the purpose of this band is for the simple pleasures of making music and having fun. The band has accepted an assortment of instruments, including a violinist in our first two terms. Now swinging into our fourth term, WRTT has over 15 songs totalling over an hour worth of music as well as over 20 gigs in the past two years. Come check us out at our charity gig on March 23rd - all proceeds go to the Regional Food Bank! Details below.

WHAT: With Respect to Time Engineering Jazz Band

WHEN: Friday March 23rd, 7 p.m.

WHERE: Conrad Grebel University, Rm 1111 (Great Hall)

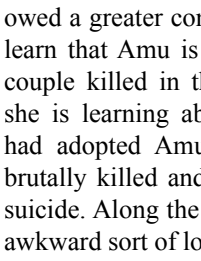
WHO: YOU and the Engineering Jazz Band

HOW: $2 tickets, or bring non-perishable food items to the door. Tickets go on sale Thursday March 15th in the CPH Foyer from 11:30-1:30 everyday through to March 23rd.

QUESTIONS: Please e-mail Ally at engjazzband@gmail.com

Movie Review: Amu

History lessons at the cinema



FARAZ SYED
3B CHEMICAL

Throughout history, humans have preserved their species through procreation and their knowledge through storytelling. Without this important medium, each generation would grow up a blank slate - doomed to repeat the mistakes of their ancestors. Amu is the story of the 1984 Anti-Sikh riots in India, in which 3,000 Sikhs were killed by angry mobs. Just as many people died in the September 11, 2001 attacks in the US, but this somewhere along the way, this genocide was nearly forgotten.

The movie is the journey of a young woman (Amu) who travels to India to discover her roots, having spent most of her life in Los Angeles with her adopted mother. Throughout this happy holiday, her mother's refusal to give her more details about her birth parents and details pieced together from new friends foreshadowed a greater conclusion. Eventually, we learn that Amu is the daughter of a Sikh couple killed in the very same riots that she is learning about. Her foster mother had adopted Amu when her father was brutally killed and her mother committed suicide. Along the way, Amu also finds an awkward sort of love (which I thought was kind of forced, even for an Indian film) with her young and lanky guide (whose father may or may not have been involved with the killings).

For its artistic and historical merit, Amu is worth your valuable theatre time. As an art project, it succeeds in captivating the audience where other hyped up blockbusters don't. I watched this along with a group of impatient high schoolers, and their response to the film was amazing. There are a couple of long scenes in the film where a character is just contemplating an idea, or exploring an area - something during which an audience would typically talk, or heckle and make noise, but Amu related to the audience so deeply that everyone was drawn into the story and not a sound was made throughout the entire movie. It is a thought-provoking and engaging mystery in which the government and the public are guilty at large. It's not all doom and gloom though; the movie also focuses on the unsung heroes of that fateful day - the many families that hid Sikh families from the angry mobs at great personal risk, much like the heroes of the Holocaust.

Gushing praise aside, the film doesn't escape some of the shortcomings of the Indian genre. True, there are no songs with a couple dancing around trees, but one can't help feeling that the melodrama and the tear-jerking scenes couldn't have been toned down a bit. Also, unfortunately for those averse to reading at the cinema, subtitles are a big part of this film, as the characters in the slums of Dehli don't speak English.

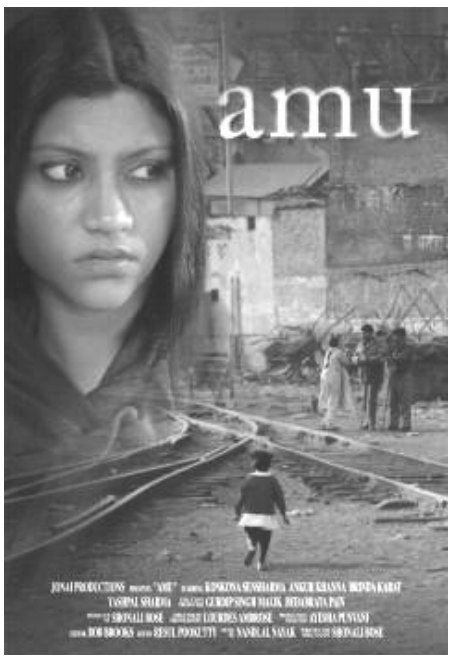
I loved how the directors didn't dress up the film for mainstream cinema with effects, or continuous music to please dense audiences (or assume audiences were dense to begin with). The movie was simple, and possibly too visibly low-budget, but then again there is sophistication in simplicity (so said DaVinci).

The topic is a sensitive one in India and still draws much debate. Despite the mountain of evidence and witness testimonies, very few individuals have actually been convicted in the numerous commissions held. There are still individuals who feel the issue is over-hyped and their posts are all over Internet forums and blogs (debasing this film). The censor board of India didn't allow certain lines implicating the government to air in India, and their comments were "Why should young people know a history that is better buried and forgotten?"

Rating: ★★★★★★★★★★

Awards:

* 2005:National Film Award Best Feature Film in English
* FIPRESCI Critics Award, January 2005.
* Gollapudi Srinivasa Award – Best Debut Director (India). August 2005.
* Star Screen Award – Best English Film (India). January 2006.
* Teenage Choice Award, Torino, Italy [Cine donne Film Festival]. October 2005.
* Jury Award, Torino, Italy [Cine donne Film Festival]. October 2005.



Submit your reviews to iwarrior@engmail

POETS Movie Schedule

Mon Mar 12 Season 6, Episode 10 and 11 of 24 Top Gun Twelve Monkeys	**Tues Mar 13** Van Wilder Eurotrip Super Troopers	**Wed Mar 14** POETS Movie Challenge	**Thurs Mar 15** The Machinist Primer Fight Club	**Fri Mar 16** Bad Boys Bad Boys II Black Knight
Mon Mar 19 Season 6, Episode 12 and 13 of 24 The One Kiss of the Dragon	**Tues Mar 20** International Man of Mystery The Spy Who Shagged Me Goldmember	**Wed Mar 21** Fahrenheit 9/11 Bowling for Columbine Supersize Me	**Thurs Mar 22** Dances with Wolves Windtalkers	**Fri Mar 23** Independence Day Deep Impact The Day After Tomorrow

Coffeehouse continued...

Continued from Page 14

upon removal, revealed a second, much thicker and coarser black fur coat on his chest! Candy the playboy bunny tried in vain to keep pace despite looking a little too muscular for the role. Candy wore a dress which took advantage of a high thigh-revealing slit. Unfortunately, after the modeling portion of the contest, it was widely agreed that the dress was more "quad"-revealing than thigh revealing, thus knocking Candy out of contention. One of the unique entries of the night consisted of Siamese twin sisters Tamika Jackson and Anna Recktion, who are born of the same parents, but curiously have different last names.

The Question period of the pageant was also filled with some crowd pleasing responses. One contestant confessed to his long-time attraction to Professor Savage and his well-trimmed moustache, while the best answer of the night came from Juanita, who suggested converting the Department website to something more provocative featuring himself to improve the overall user experience. Checking the website recently, it was seen that the proposed changes have not yet been made.

Tamika and Anna took home a winner's trophy for collecting the most amount of money before the contest in contribution toward cancer research. However, the big winner of the night by judges' and voters' consensus was Apple Crumble. The professional dancer made a bold statement during the Modeling component, winning himself many votes by rubbing himself against the evening's hosts. Apple Crumble's strong start allowed him to hang on to a win, despite having a weaker Question round, during which he constantly forgot the question that was being asked. This goes to show once again that sex does indeed sell, even in contests adjudicated as objectively as the Miss Systems Design Pageant.

A video of the event was kindly recorded by Kristen Yee Loong, and in total over $300 was raised for the Canadian Cancer Society. Many thanks goes out to the organizers, Katelyn Poyntz, Rob Lovell, Melissa Kerr, Cheng Hu, and Atia Haq for making the event possible. Thanks also to the individuals who volunteered their time to make sure everything ran smoothly. And finally, a giant thank you to the charismatic MC's Mike "Miller-Boyette" Schnurr and Chris "Sex Pellet" Pellett who kept the audience entertained both with their witty banter and also by allowing Apple Crumble to rub against them. The event was graciously funded by the Department of Systems Design, which sponsored the use of a sound technician. Thank you to all those who participated to make the Systems Design Coffee House such a resounding success!

Various bands made the Coffee House a success.

Prof. Quotes

" ... incest, also known as the game the whole family can play, ..."
-Abler, ANTH 102

"It's reaming itself a new one through here! It's eroding like a banshee."
-Annable, CIVE 381

"You're fulfilling your engineering orgasm dream of permanent employment for yourself for the next 5000 years."
-Annable, CIVE 381

"Don't ask about flooding. These are Americans. They don't think that dynamically."
-Annable, CIVE 381

"As much as I enjoy being sadistic..."
-Annable, CIVE 381

"We want to minimize shear and maximize cross-sectional area... it's like a little cyclic incestuous game we're going to play here."
-Annable, CIVE 381

"And colour graphs are important because you can charge more."
-Straube, CIVE 507

"Everything's a TLA - three-letter acronym."
-Straube, CIVE 507

"So as you can tell, the chart is meant to make your head explode when you look at it."
-Straube, CIVE 507

the Iron Inquisition

What are your experiences with the luck of the Irish?

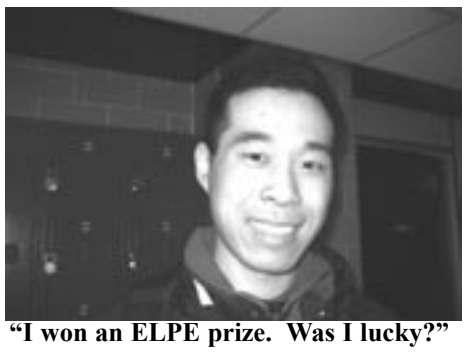
Teri Leung, 2A Systems Design

"I eat Lucky Charms"
Kelvin Ng, 2A Systems Design

"I'm not Irish"
Chandrahas Satsangi, 2A Electrical

"When I buy Guiness, other people buy me more"
Stacey Hannam, 4B Chemical

"There is no such thing as luck in engineering"
David Wu, 4B Electrical



"I won an ELPE prize. Was I lucky?"
Ashley Ee, 2A Systems Design

"I closed my eyes and when I opened them, I had a sac of potatoes and 3 green beers"
Greg FitzGerald, 3B Mechatronics

"Arrgh! Them Irish, they always be after me Lucky Charms!"
Amanda Hoff, 3A Mechanical

"Well, there was a pretty luck Irish girl this morning"
Adrian Spanu, 2A Systems Design