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THE IRON WARRIOR

THE NEWSPAPER OF THE UNIVERSITY OF WATERLOO ENGINEERING SOCIETY VOLUME 31 ISSUE 11 | WEDNESDAY, SEPTEMBER 29, 2010

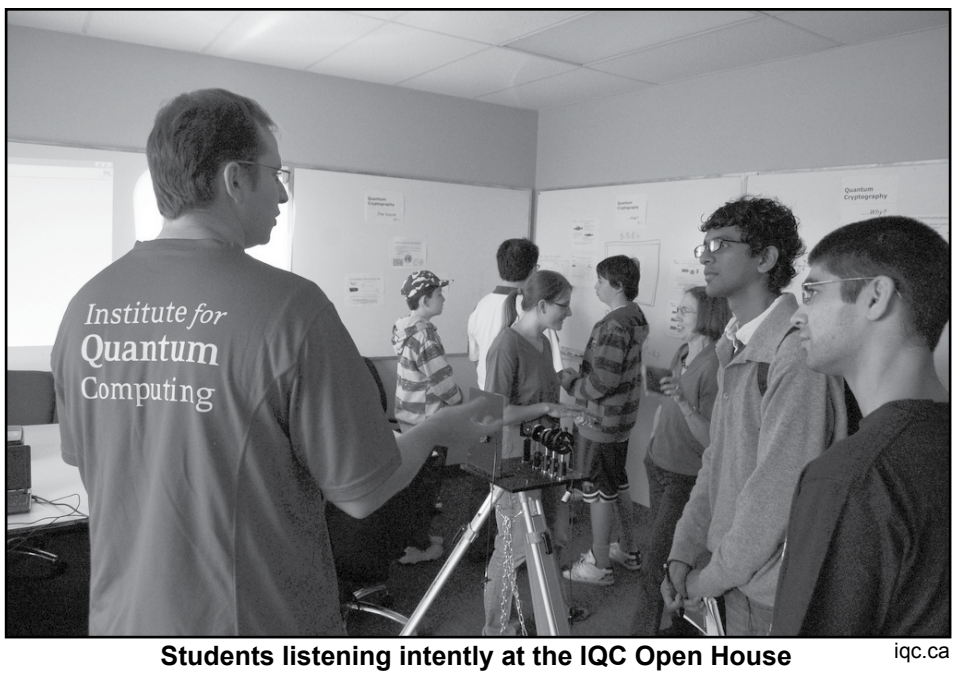
twitter.com/theironwarrior http://iwarrior.uwaterloo.ca

The Open House at the IQC

KRISHNA IYER
2A NANOTECHNOLOGY

Saturday morning, the researchers at the Institute of Quantum Computing (IQC) were setting up for their all-important open house. It was a sunny morning and a fine day for some of the brightest minds on campus to congregate at the Research Advancement Center (RAC and RAC2) in the Research and Technology Park.

Founded in 2002, the mission of the Institute for Quantum Computing (IQC) is to "aggressively explore and advance the application of quantum mechanical systems to a vast array of relevant information processing techniques." The IQC holds an open house every year to improve their relations with the people of the Waterloo area. According to Colin Hunter, Communications Specialist, "Waterloo has the most inquisitive population and the people are highly inclined towards academia." IQC's open house is meant as an outreach program to connect with people. According to Sean Collins, Network Manager at QuantumWorks, Canada is the world leader in quantum information processing. QuantumWorks is an affiliate of the IQC and serves as a co-ordinator in quantum computing research all over Canada. It is responsible for facilitating cooperation between researchers and funding research in quantum information processing. As a result, many of the world's leading minds in quantum research have joined the IQC. Recently, Dr. David Cory, formerly a leader in quantum computing at Massachusetts Institute of Technology, has also joined the IQC.



Students listening intently at the IQC Open House iqc.ca

As soon as visitors entered, they were greeted by delicious treats to prepare them for the mind-intensive day ahead. The Discovery Center, aimed at children, had all the classic science fair experiments, but with a twist. There was fresh ice cream made from liquid nitrogen, superconductors, levitating magnets and best of all, a train that started to run when fuelled with liquid nitrogen. Additionally, there were a variety of experiments to illustrate the basic principle of computing.

As visitors came down to the second floor, there were various experiments from data encryption and application of quantum physics theory, to standard data processing. There was the "Alice and Bob System" for information transmitting. Polarized light beams are used to transmit information from the RAC to the EIT and then to the Perimeter Institute. The obtained data is then analysed through the principles of quantum computing and probability to check the data for integrity. There were a variety of experiments on display to illustrate data encryption and checking for data integrity. Similar systems have been in place for data transmission over fibre optic to ensure highest security of data and preventing unregulated snooping of the data.

The main floor had all the extreme experiments. There were experiments using nuclear resonance for controlling the resonance of certain atoms. They use the different orientations of a molecule to store data as 1s and 0s. There were more experiments related to Electron Spin Resonance (ESR) which used the spin of an electron to store data. There were highly sensitive one-photon-sensing systems. There were systems that brought the temperature of a sample to about 15mK. There were also systems that produced InGaAs (Indium Galium Arsenide) quantum dots quickly and efficiently on a microscopic scale. Additionally, all the systems were produced on-site and offer a large range of customizability. One of the innovative researchers has custom built a program to control one of the systems using a mobile if necessary. The IQC also houses a grade 1000 clean room for the fabrication of their highly sensitive devices. The clean room houses state of the art facilities such as Electron Beam Lithography and other similar processes.

The highlight of the day was the public lecture by Dr. David Cory. Overall, the IQC open house was enlightening. Granted, a lot of the core research is way beyond the understanding of an average person, but the sight of all the fancy equipment is enough to make you stand and stare in awe. These applications have a large scope and many of these technologies are already being used. One of the leading news journals once carried an article about a quantum information computing system being cracked by one the researchers collaborating with QuantumWorks.

What's Been Happening with WatPD Engineering?

ERIC COUSINEAU
VP EDUCATION

SUC (Senate Undergraduate Council)

This is a council consisting of student and administrative representatives from each faculty, as well as upper-level administration of the university. We approved the implementation plan for WatPD Engineering, which will go to a final vote in the October Senate Meeting. Once this is approved engineering students will have the following options depending on their situation:

1) **For Students that have credit for PDEng 15 and PDEng 25 as of January 2011.** Students who have passed both PDEng 15 and PDEng 25 will be able to select the other three courses in their professional development program from: PDEng 35, 45, 55 and PD 3 to 7, depending on their availability.

2) **Students who have passed PDEng 15 but not PDEng 25 as of January 2011** may select one of the following two paths:

1) PDEng 25, followed by three courses from the courses listed in 1.

2) PD 20, PD 21 and then two courses from the PD elective suite.

3) **Students who have not passed any PDEng courses as of January 2011** will be able to select one of two paths:

1) PDEng 15, PDEng 25 followed by three courses as listed in 1, or

2) PD 20, PD 21 followed by three courses as listed in 1.

PDEng courses will not be available after the end of the Winter Term in 2012. Furthermore, PDEng 15 to 55 will only be offered in a term if sufficient interest is shown. If your situation doesn't fit into the above chart, it will have to be considered on a case by case basis. The reason that PDEng can't be immediately removed is that the academic calendars for all classes 2014 and older contain the option for PDEng, so it is required that the option is available to them if they so wish to use it.

WatPD CC (WatPD Engineering Curriculum Committee)

Since May 2010, WatPD Engineering has been progressing at lightning speed and many things have been accomplished.

See WATPD Update on Page 3

Nanotechnology Engineering Accredited

FARZI YUSUFALI
2A NANOTECHNOLOGY

For all those who haven't heard, here's some news for you: the Nanotechnology Engineering Program has finally been accredited! This new development means that the Nanotechnology program joins the ranks of the engineering programs that have been accredited by the Canadian Engineering Accreditation Board (CEAB). The Nanotechnology Engineering Program has been accredited unconditionally for the next three years, starting June 2010 (just in time for the new graduates to be accredited as well). Without this accreditation, the students currently enrolled at this time would not have received the Bachelor's Degree of Applied Science in Nanotechnology Engineering.

As most Nanos know, the Nanotechnology Engineering program was first introduced at the University of Waterloo in September of 2005. Over the next five years, a primary goal set out by the university was to get this new program accredited in time for the first set of students to graduate. The visit by the accreditation board in 2009 evaluated the program to see if it fulfilled the necessary components that comprise a CEAB-approved engineering program. The pre-accreditation review that transpired in 2008 listed a number of concerns that had the potential to withhold the program's accreditation.

Any accredited engineering program requires a certain number of teaching hours. The Nanotechnology program also requires those hours to be divided into the three branches that comprise the university education in engineering. These three branches include the science component, the engineering science component and the engineering design component. While the first two components were fulfilled by the Nanotechnology Engineering program, the engineering design portion was originally lacking in the course curriculum. After minor improvements following the initial review, the 2009 visit stated that this was no longer an issue.

Another issue that was listed as a point of concern by the accreditation board was the health and safety factor that needed to be added to the program's curriculum.

See Nanotechnology on Page 4

Letter from the Editor

Speed Devils, Fare Disputes and Cookies

YIK TUNG ROY LEE
EDITOR-IN-CHIEF

Hello Folks! I had a great summer filled with four popped tires, cowboy hats, fire resistant coveralls, visiting two of the three coasts of Canada and a minor concussion; however that is a story for another time and another place. I am super excited to be back here to take on the coming school term and making my mark as an Editor-in-Chief. I don't have any major plans to change anything; I mean why fix something that isn't broken? There are a few minor changes with our look, such as our headline fonts and the headers of the pages.

But Oi! It's been a pretty crazy and busy few weeks. Catching up on things after Orientation Week was a pain. It is amazing how long it takes to catch up after about a week of ignoring your e-mails. Lesson learned: A few minutes a day is much easier to manage than a few hours on the weekend. Plus there are much better ways to be spending your weekend than slaving over e-mails and catching up on class work and what not.

Anyhow, I don't know about everyone else but this September seemed to have been a touch more eventful than last year. It was perhaps due to the fact that I spent way too much time on campus as a first year. Another lesson learned: Get off campus whenever you can. There are some pretty neat things that go on around Waterloo. Things like the St Jacob's Market or even the Kitchener Farmer's Market are worth checking out. Fresh groceries can make any good dish even better. I am a bit of a foodie :D. However, if you have a tight budget like most university students, go check out the Asian market in downtown Kitchener. It is called New City Supermarket. Pretty great place, you can get boneless chicken breast for the same price as a package of chicken thighs at Zhers or Valumart. It is really quite a deal; on the other hand you have to deal with the slightly lower cleanliness of the Asian market.

Back to the fact that it has been a more eventful month. This month I saw a guy wipe out on his motor bike. Pretty scary actually, I guess he miscalculated his turn, but man, being a speed devil is most definitely not worth it. This man got thrown from his bike as a result of his momentum alone; he didn't hit anything before he wiped out. His bike ended up against the curb and he was laying on the ground a metre or two from his bike. He got up immediately. He seemed a little shaken up but other than that he was ok. By the way, he was wearing full safety gear, a full face helmet and an armoured jacket. So that was most definitely a contributing factor. A similar thing happened to me this summer, except I was on a mountain bike and I didn't quite get up immediately. I actually spent five hours in the emergency room waiting for a doctor to come see me. I don't really remember the night, however I have been told that I could not tell them what the date was and I kept asking the same questions, such as, "Is today Saturday?" Actually to this day, I don't know what happened. I remember being on my bike, starting to lose control. Then... nothing until a few flashes at the hospital and that is it.

Other things I saw this past few weeks include two friends getting into a fist fight over something stupid, a cop pull across two lanes of oncoming traffic to break up a large mass of people, then a few metres from that I saw a handful of people lighting up a joint... saw another cop pull over two taxi's to settle a fare dispute between the drunken passengers and the driver. It was a pretty crazy month and that isn't even counting the awesomeness that was Orientation Week and the madness that was involved in the first production week. The craziest thing is that when those two friends were fighting, there was no indication that they were friends. They started going in a dark alley and when we went to get the nearest cop, it was the one who was settling the taxi fare dispute. The cop dismissed my roommate, claiming he was busy and someone else would attend to it. I am not sure about you, but I think that a fight is a bigger deal than a taxi dispute. Arguably the cop was right, the fight eventually calmed down after one of the guys just arm locked the other until he calmed down.

"I guess he miscalculated his turn, but man being a speed devil is most definitely not worth it."

Back at home or my apartment, things were not so calm either. There was a fire alarm at 3 am one morning. A total of five people evacuated the building... our building is three floors with about twenty people on each floor and only five people evacuated. It really makes you wonder how well people can sleep through fire alarms. Another thing is we got locked out of our laundry room and our mail box because our landlord failed to give us that set of keys. This leads to my next point about mail; one of the guys who used to live where we live now came by and picked up his mail yesterday. One piece of mail had a new debit card in it, which is most definitely something you don't want a stranger picking up. So lesson learned: update your mailing address. Unless of course you are moving to a super new address that the post office doesn't know exists yet. Then you are stuck between a rock and a hard place and all your mail will get returned to the sender, which isn't fun to deal with.

Going back to *The Iron Warrior*, I hope to be able to keep the high standard of quality that *The Iron Warrior* has come to be known for. I plan on introducing a bit more sports content and hopefully we can get enough advertising to have a few colour issues throughout the term. Other than that as far as the reader can tell I don't think that much will change. If anyone has any great ideas, come out to our meetings or drop us an e-mail, if you are feeling really classy you could even slip a note under our door when the office isn't open. Further details about when and where we meet, where our office is or how to reach us by e-mail are all listed below, so come check us out.

Finally, I would like to thank the people that helped me transition into Editor-in-Chief and made my first production weekend relatively smooth and painless. You are awesome! I will buy you all more cookies in two weeks.

To everyone else, go out and enjoy the last few days of summer. I know that the fall officially started on September 22nd, but it is still plenty warm enough to be considered summer. I'm from Calgary, if that explains the previous statement. If not, know that it snowed in Calgary last week and that it snowed throughout the lovely spring month that people in Ontario know as May.

Cheers,
Roy Lee

IW has Twitter

Ever wanted to get your hands on an issue of *The Iron Warrior* when you weren't at UW? You may have checked the website for new articles but the stress of co-op (and a certain course we must take during our employment) may cause us to forget about it. Cry no more, *The Iron Warrior* has a Twitter account! You can get updates about the latest articles at *@TheIronWarrior*. Some complain the Iron Warrior is just too awesome to handle all at once, so if you follow *@TheIronWarrior* you'll get a small dose of awesome daily.

- Ammar Masud
2A Nanotechnology

Issue #2 Deadline: Friday, October 8 at 6:00pm for publication on Wednesday, October 13, 2010
Send your submissions to iwarrior@engmail.uwaterloo.ca
Fall 2010 Publication Schedule: October 13, November 3, November 17, December 1

THE IRON WARRIOR

The Newspaper of the University of Waterloo Engineering Society

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

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

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

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WatPD Update

From WATPD from Page 1

I'm going to do my best to briefly inform you of what has occurred to date. Keep in mind that this is only a summary and not at all exhaustive.

This curriculum committee was formed in early May with representation from each faculty, as well as student representation. The role of this committee is to manage and facilitate the transition from PDEng to WatPD Engineering. The learning goals of the first course were defined to be: Communication, Critical Thinking, and Drawing Reasoned Conclusions. These skills are used to interpret engineering data, and present analytical conclusions clearly and concisely. This is a very common practice in Engineering, and one that many students can improve on. And RFP was formulated and development teams submitted proposals. A proposal was received from the philosophy department, featuring Dr. Greg Andres and Dr. Tim Kenyon as the main developers.

These individuals are very experienced professors with years of experience teaching communication and critical thinking to engineering students taking their courses as electives. Their proposal was chosen because of the following features: tight focus, strong integration of critical thinking, and good integration with engineering context. The way that they integrate the course with engineering context is with their innovative use of multimedia. Each module begins with a video lecture from an experienced professional engineer talking about his or her experience related to that module, and the effects of that skill or concept.

Since the proposal was chosen, the curriculum committee has been working with the philosophy team to incorporate all of the desired course elements. A design review meeting was held on September 8th, and the committee felt that the course was well on track. This is very exciting for students because it brings a unique approach to teaching professional skills that promises to be more engaging and exciting than the approach used in the past. As a student, I look forward to seeing the finished product, and I have confidence that their experience teaching these concepts in philosophy courses will translate well to professional development courses in our faculty.

Since the design review meeting on September 8th, the committee has been working to put out an RFP for PD 21. The learning goal of this course involves: defining problems, developing solution plans, and creating technical and non-technical presentations of plans. These skills would allow a student to take a problem and develop a plan to solve it, as well as communicate their plan to others. Our goal is to release the RFP before the end of September. I will keep you updated as things develop for PD 21.

In other news Gord Stubley, the Academic Director of WatPD Engineering, is organizing a forum meeting to communicate and discuss the progress of WatPD thus far. The meeting is currently scheduled for 7:30 – 9:00 on Thursday, October 7th in DC 1351. More information will be released about this as the date approaches.

Thank you for reading my article. I encourage you to send any questions you have to *asoc_vpedu@engmail.uwaterloo.ca*

The David Johnston Ice Cream Social

ALLISON NGSEE
1A MANAGEMENT

The David Johnston Ice Cream Social was held on September 16th at the Davis Centre. It was a joyous occasion for the students, faculty, and alumni who came to celebrate with Canada's 28th Governor General. This event marked the end of Johnston's 11-year tenure as the President of the University of Waterloo, and the beginning of his career as the Queen's representative.

The atmosphere was lively, and featured the Engineering Jazz Band "With Respect to Time". As people mingled and enjoyed the free ice cream, they watched the slideshow depicting Johnston's inauguration on monitors scattered throughout the lobby.

Finally, Johnston himself arrived, and the crowd eagerly gathered around him. After a performance by the UW Cheerleaders and the singing of "O Canada" by the WaterBoys, Johnston went on stage and was presented a painting depicting a 'barn raising'. It was to represent a common metaphor he frequently uses about Waterloo's atmosphere being as collaborative as the community effort taken to raise a barn. Johnston went on to joke that this was his first real job, as he never left university. The crowd applauded and gathered around him again as he mingled with the audience, and one could see the elation on people's faces as they shook hands with the next Governor General.

Johnston is proud of having been the former President of the University of Waterloo for, in the words of Johnston himself at the Social: "*The Iron Warrior* is wonderful. Engineering is wonderful."

Michael Seliske

Thank You!!!

**ENGINEERING FOC
ORIENTATION WEEK 2010**

IT'S DONE! And it was amazing.

Orientation Week 2010 was, to each of us, one of the best moments in our lives. It was a goal that we waited months to see happen and it surpassed all our expectations. Thank you to everyone who helped make our dream come true. We were inspired, thankful and grateful for everyone and everything that happened.

EngFOC '10 Unknown

All the events ran beautifully thanks to the leaders and directors! Earn Your Hard Hat was epic. We saw that the events kept you all laughing and moving – we hope you enjoyed the water slide, mudpit and snowman! And did you see the Aerial Photo?! It was an elephant!!! Like, actually (and make sure to pick up a copy from the Orifice!) We hope you all learned more about the services at uWaterloo during Service Safari, be sure to check them out over the next few weeks. Junkyard Wars was definitely an event to remember, although it was a chilly day, you all created some impressive pieces and we saw the engineers in you. With a 2-way petting zoo and a Jack-In-The-Box, who realized the cold? You also got to Meet the Tool! Now you can look forward to getting ringed in your 4th year so you can hold our beloved mascot. We hope you all had the chance to learn more about co-op and first-year engineering during Eng101, thanks for making it a success! Last but not least: Scavenger Hunt. We had a ridiculous number of events that night. From Distances and Human Chess, to EDCOM Smash, it was a busy night but a perfect one. Closing Ceremonies was spectacular and a very heart-felt night for us, thank you.

To the first years, we hope you had an incredible experience and a memorable one! We hope you took away something valuable and perhaps set goals for yourself over the next few years. Make sure to hold on to the relationships you made during the week. Don't be afraid to get to know your leaders more and ask them questions – they're there for you! Get to know other upper-years as well over the next year and beyond as they are a valuable source of information on your program and life at the university. Be sure to sign up to be leaders next year!

To all the leaders, Mary Bland, Robin Jardin and Staff members, we couldn't have done it without you. We were honoured and so incredibly thankful to work with you. There is no amount of thanks that will equate for everything you have done for the Week and the first-years.

We realize that the events of Saturday Night left some of you wondering but all leaders will be receiving more information from us by email. We are a family first and foremost and be sure that nothing will change that.

Our next task is to choose next year's FOC, so GET EXCITED FOR ORIENTATION 2011!!!

Love always,

Jam, Brent, Cass, Sean, Stuart and Niz

PM Announced Funding for Waterloo Region LRT

ADRIANA CAMERON
3B MECHANICAL

On Thursday September 2nd, Prime Minister Stephen Harper visited Kitchener to announce that the federal government would contribute up to $265 million of the $800 million needed to build a rapid transit system linking Kitchener, Waterloo, and Cambridge. The federal government agreed to fund one-third of the proposed system as part of the Building Canada Plan.

The proposed rapid transit plan includes a 13 to 14 station light rail transit line (LRT) between Conestoga Mall in Waterloo and Fairview Park Mall in Kitchener, and a six station bus rapid transit (BRT) corridor from Fairview Park Mall to Ainslie Terminal in downtown Cambridge. If all goes according to plan, the rapid transit system should be operational by 2015.

The provincial government initially pledged two-thirds of the cost of the rapid transit project. However, earlier this year, the provincial government announced that funding would be scaled back to $300 million, leaving a $235 million shortfall that the region will have to overcome.

The $235 million shortcoming has caused councillors to question whether a light rail line is still feasible in Waterloo Region. In order to reduce costs to the local taxpayers, councillors are looking into modifying the rapid transit plan by scaling down or eliminating the light rail line in favour a longer bus rapid transit corridor.

"I will not support $235 million coming from the local taxpayers. That's not affordable. So you have to look at either reducing the scope of the project … or you could go to an entirely bus-based system," said Tom Galloway, a Regional Councillor from Kitchener.

Advocates for LRT argue that it better serves large groups of people, and considering the projected transit use increase and population growth, the operating costs will be lower than a BRT system. Furthermore, many advocates believe that LRT will attract more people, jobs, and businesses to the region than BRT. Additionally, it is believed that LRT would make people more inclined to regularly use public transit as it can be better handle large numbers of pedestrians and cyclists.

Critics of the project believe that BRT would be sufficient, and would come at a lower price to the local taxpayers.If the rapid transit plan was modified to lower the cost, the provincial government would still contribute $300 million, and the federal government would contribute one-third of the cost of the project.

The funding for the Waterloo Region project comes despite a cut-back in provincial funding to Toronto's "Transit City" plan that will double the length of the first stage, from five years to ten years. As well, the funding also comes despite pleas from other cities looking for funding from the federal government, such as Hamilton, Mississauga and Brampton.

Nanotechnology Engineering Program: Accredited

From Nano On Page 1

Since the field of nanotechnology is a relatively new area of study, very little is known about the health issues that accompany the use of nano-scale materials. Furthermore, the decreased size of the materials being handled poses a significant threat to the safety of those who work with them. Their smaller size increases the ability of these substances to permeate through the skin and harm the body. A total of thirty-two hours of lecture regarding this topic, spread over the five years of study, was added to the core curriculum of the program. In addition to the thirty-two hours of lectures, students are required to submit assignments and write two major tests on the material covered. As a result, all the components listed above are now requirements in the milestone that must be completed in order to graduate (with exceptions to those who have or are close to graduating as of now).

However, the most important concern highlighted during the accreditation visit was the lack of P.Eng that taught the

Quantum Nano Centre Under Construction

Nanotechnology Engineering courses. The program fell short in providing the required fraction of instructors that possessed a P. Eng license as stated in the requirements for any accredited engineering program. On the other hand, a slew of instructors that teach Nanotechnology courses did have applications in progress to receive the P. Eng license. The Nanotechnology Engineering program was therefore accredited for a total of three years until June 30, 2013. During the next accreditation visit, scheduled for January of 2012, the accreditation board will pay specific attention to this shortcoming. However, the University of Waterloo is very confident that the lack of P. Eng instructors is only due to the years of engineering experience required for each applicant and the additional time needed to have the applications processed. Furthermore, the University of Waterloo has taken active steps to ensure this program remains accredited by scheduling workshops and practice professional engineering exams for the license applicants. In the case that some of the applicants have not received their licenses before the next accreditation visit, they will be issued limited licenses in the time preceding the acquisition of the full P.Eng license.

While the Nanotechnology Engineering program is relatively new, the CEAB has chosen to hold the program in the University of Waterloo as the standard for any other engineering programs of this nature. With the confidence that the university has for this promising program and the quick accreditation of the program, it looks like the Nanotechnology Engineering program at UW will be recognized, henceforth, as an exemplary model of post-secondary education in the field of nanotechnology.

Tips for Your First Professional Job

ONTARIO SOCIETY OF PROFESSIONAL ENGINEERS

It's frustrating when people tell you that you need experience before you can get a job in your field, but the only work you've done is non-technical, like serving customers at the local pub or restaurant.

The Ontario Society of Professional Engineers (OSPE) would like to offer some practical advice to get you job-ready when you graduate. The key thing to remember is that, in addition to your technical knowledge, employers are looking at your non-technical skills as the factors that set you apart from other applicants.

According to a recent study by Engineers Canada (*www.engineerscanada.ca*), the good news is that an overwhelming majority (87%) of engineering employers consider graduates from Canadian universities, including yours, as having the engineering or technical knowledge necessary for entry-level jobs.

These same engineering employers do not, however, hold the same positive view of the non-technical skills of recent graduates: Only 64% expressed satisfaction. Non-technical skills include general communication, inter-personal skills and being a team player. In addition, working with non-technical staff and report writing were deemed to be very important skills for successful applicants.

So, what will set you apart in those cover letters and conversations with company representatives at a career fair? It's the non-technical skills mentioned above, but there's more to consider.

Let's take a student working as a server and making his or her way through an accredited university engineering program. Sometime during fourth year, the soon-to-be grad starts looking for and applying to entry-level engineering positions like those listed on OSPE's (members only) job posting site, on company websites or by other sources. He or she quickly realizes that while all jobs require an engineering degree and some technical specifics, most postings also list a wide range of non-technical experience and expertise for employment, such as:

- excellent problem-solving and decision-making skills
- ability to work both independently and in a team
- demonstrated creativity
- aptitude for leadership
- communication, customer-service and interpersonal skills, and
- outstanding organizational skills

Instead of becoming discouraged, students should look at the skills they have developed in their current non-technical position. As a server, they've learned how to keep their customers happy while dealing with challenges in an often fast-paced environment. They've learned to work independently, but they still belong to a team of employees. They've made quick decisions and demonstrated leadership in challenging situations while interacting with a wide range of personalities–all examples of the soft skills employers deem invaluable.

Make sure you know what the company you're approaching does!

Finally, at career fairs, make sure you know what the company you're approaching does! This should be a natural first step, but it's surprising how many students neglect to do this. Before you approach a prospective employer, do your homework. Look the company up on the Internet; find out what it does and the projects it's working on; look at its career section to view jobs, even if you're not fully qualified for them. Then, approach the representative at the booth to ask questions or comment on some of the company's work, to show that you're familiar with it. While you may not end up working there, chances you'll be remembered much more favourably than someone seeking work but not knowing what the company is all about.

These are just a few of the many suggestions OSPE has to offer you. Something to think about if you are an engineering student is to join OSPE as a student member for only $25 a year (plus HST) and tap into OSPE's members-only job posting site.

Bottom line- persevere, establish strategic ways to search for jobs, set yourself apart and take stock of all your skills.

Good luck!

The Ontario Society of Professional Engineers

Homecoming Carnival

LYDIA TERISNO
1A CHEMICAL

A cloudy morning did not stop the volunteers from making the Homecoming 2010 happen on Saturday. The Family Carnival was one of the many fun events held in the Homecoming. Bean bag toss, banana toss, mini soccer and football game, and arts and crafts booth were just a little part of what was taking place in SLC Great Hall. The alumni started coming around 10 am and they brought their young children with them.

Our very own David Johnston was there to read a story to the kids. He was even accompanied by Curious George! The Math Society was having a cotton candy stand, the Arts was having arts and crafts booth, and Science Faculty had their very own galelioscope door prize. The Faculty of Engineering held its own events in the FedS Hall, but that did not reduce the fun of Family Carnival. Who can resist a magic show, tons of colourful stickers, and face painting? Being there was great, but making it happen as a volunteer was even greater!

There were not many volunteers from Engineering, but I should say that engineering's duct-tape magic made a lot of things easier in the carnival. It helped with garbage bags, setting up games, and even door knob hangers in crafts booth. The Carnival was indeed a great event to be involved with. I am looking forward to the next Homecoming and helping out cute children with crafts again! You should join too.

FedS Vacancies and Upcoming Events

TREVOR JENKINS
FEDS COUNCILLOR

Hello ladies and gents,

Whether you're back in Waterloo for school or off in the middle-of-no-where for co-op, I hope that your time thus far this term has been awesome.

Off the top, the most important things to get out to you all are the upcoming FEDS and Senate elections that will be happening this term. There are currently two vacancies for Engineering Councillors within the Federation's Students' Council, as well as one open Student-at-Large Senator position. The councillors are in charge of representing engineering students within the Federation, providing insight on issues as they arise, and raising students' concerns that may come up. The time commitment is one meeting a month (on a Sunday), that lasts for 3-7 hours, plus varying requirements for different committees that councillors are required to sit on. If you have any specific questions or want more details, e-mail me at *t.ek.jenkins@gmail.com*. Nomination forms are due October 1st and are available at pulse.feds.ca.

Next up in another opportunity to get involved; the Ontario Undergraduate Student Alliance (OUSA) is the provincial lobbying organization that the Federation helped to found. They undertake research on a number of issues relating to undergraduate education (quality, access, and funding), and then actively lobbies the provincial government to make changes that will improve the undergraduate experience. Their General Assembly will be taking place November 5th-7th at Brock University and the Federation is currently accepting applications for two student-at-large positions within the contingent of delegates from UW. As of press time, there is no indication of when the deadline is, so I strongly advise you to get on it if this interests you. More information about the specific role and application requirements are at *http://info.feds.ca/jobs_and_volunteer*.

Our last September meeting wasn't too exciting by any means; however a number of important administrative tasks did get done. We had a very thorough presentation by OUSA (*www.ousa.ca*) about what their role is and how they work within the greater scheme of things. We also filled a number of vacancies that opened within the various committees of council, including a large number of student-at-large positions. Unfortunately, no engineering students showed any interest in the positions based on the lack of response from the mailing list message earlier in the month, however we did get all the spots full so the day-to-day tasks like approving new clubs and overseeing our elections can continue onwards.

That's about it for recent updates from the realm of the Federation. If you have any questions, or want more details on anything I've written here, please don't hesitate to give me a shout at *t.ek.jenkins@gmail.com*. I try to keep it short and to the point here so you don't stop reading half way through ;-)

And again, PLEASE CONSIDER RUNNING FOR THE TWO VACANT COUNCILLOR SEATS FROM ENGINEERING. In all likelihood, you'll get acclaimed so you don't have to worry about the hassle of running a campaign.

Screw DDT, We Have Lasers!

BRENT MCCLEAVE
1A NANOTECHNOLOGY

Every 43 seconds, an African child dies of malaria because a vaccine isn't available or proper medical treatment is not accessible, and very little can be done to stop this plague from killing more. Spraying DDT has catastrophic environmental results, mosquito nets are not available to everyone, and an effective vaccine for malaria has yet to be created. So what happens when conventional methods for slowing the progression of disease are proving insufficient? Well, as engineers, the answer should be simple: unconventional methods (generally, the more radical and obscure, the better). Luckily, a recent speaker at TED, Nathan Myhrvold announced just such a revolutionary prospect.

To those who are lamentably unaware of TED's existence or purpose, TED (an acronym of "Technology, Entertainment, Design") is an annual, non-profit conference through which the best and brightest from a broad range of fields gather to share "Ideas worth spreading." Notable speakers include Stephen Hawking, Jane Goodall, Bill Gates, as well as a lengthy list of Nobel Prize winners, all of whom have presented TED talks regarding issues not just in the fields of TED's namesake, but in the arts, culture, science, business and world issues as well. Nathan Myhrvold's talk in February of this year was about the spread of malaria in Africa, and his unusual plan to combat it.

Myhrvold began his talk with the aforementioned horrific statistic regarding African death rates, and how typical measures against the spread of infection have been unable to halt malaria's progression. As such, he revealed his response to the growing threat: a surface-to-air mosquito death laser (and somehow, it's even more awesome than it sounds). Several mosquito laser batteries would be placed at the perimeter of a location (for example a hospital or a school). In the event that an insect enters the general vicinity of these turrets, a low energy laser targets the insect in question while a computer measures its wing beat frequency to determine whether it is a mosquito or not. Other species who enter the laser's line of sight remain unharmed, however, dangerous trespassing mosquitoes are prosecuted – to the full extent of the electromagnetic spectrum. If the trespasser is identified as a mosquito, a high energy laser is fired at the mosquito's thorax, burning through and detaching its wings, sending the infectious menace into a downward tailspin to its death. With enough laser turrets, entire swarms of mosquitoes could be decimated with relative ease, causing a sudden, drastic decrease in the rate of malaria progression in Africa.

This sort of radical and inventive genius makes me respect the engineering profession beyond measure. Conventional methods were either ineffective or environmentally devastating, so a device was conceived to solve a global issue while using technology from science-fiction (I will admit to a slight bias, the fact that lasers are used to combat epidemics in Africa has deeply endeared me to this machine). And, despite its complicated operation, the turret can be constructed out of items bought on eBay (such as the lasers from BluRay players) without too extraordinary of a cost, a cost that would be reduced if such devices were built en masse. As such, I'd certainly chip in money for a few lasers for Africa. Well, maybe one for me too, these bites are really itchy.

Greetings from EWB!

FARZI YUSUFALI
2A NANOTECHNOLOGY

Hello fellow engineers and welcome (or welcome back) to the University of Waterloo! As the majority of students are getting into the swing of busy university life, it's also time to get involved in extra-curricular activities. Luckily for you, Frosh, I have taken it upon myself to give you a little bit of information about an organization present in the University of Waterloo that supports a good cause and is relatively engineer-centric. Engineers Without Borders (EWB) Canada is an organization that prides itself on providing critical thinking solutions concerning international affairs, predominantly in developing countries. The organization believes that the knowledge and skills gained as an engineer can be used to eliminate poverty that is a predominant part of life for over 800 million people in the world. Specifically, the UW chapter of EWB concerns itself on two main aspects of the organization: Canada-wide programs and overseas programs.

The programs run in Canada greatly involve increasing the awareness of Canadians to the challenges of living in poverty and encouraging Canadians to make conscious gestures that aid poverty-stricken nations. This is generally done by encouraging peers to buy fair trade products, markets, fundraisers, and events that help fund the African programs currently in place at UW and by making presentations to high school students that increase awareness and interest in the work that EWB is trying to achieve.

The African programs in UW comprise of sending students (whether on co-op or not) overseas to work with NGOs (Non-Governmental Organizations) to build sustainable development that puts in place the means and equipment for the locals to help themselves. This usually done by focusing on the building capacity of the community rather than handing out goods to the natives that live in these impoverished companies. A number of engineering students are sent on a paid co-op term during the summer (or sometimes in the fall) to an African country, where the volunteers usually do work that includes establishing local businesses, designing new systems of data-collection and, most importantly, teaching others to do the same.

While you may not want to go as far as going to Africa just yet, there are still plenty of ways to get involved with EWB. For instance, you could join the Outreach Team that focuses on doing EWB presentations in high schools and at community events or join the Fundraising Team where they raise money for the African programs through runs, markets, and Pancake Mornings in CPH. If you are interested in joining EWB this Fall Term, come out to the first general meeting of the term on Tuesday, September 28, held in RCH. For more information about EWB, go to *www.uwaterloo.ewb.ca* or email at *uwaterloo@ewb.ca*. Hope to see you all (or a bunch of you) at the first meeting!

Special for YOU in 2A & 2B

PETER ROE
DIRECTOR OF EXCHANGE PROGRAMS

NOW is the time to make definite plans for exchange. You have made it through first year with flying colours; consider how to get the heck outta here and have a great time in foreign places for part or all of third year!

Engineering has exchange arrangements with over 60 institutions around the world where you can enhance your education, gain valuable insight into the cultures and languages of other lands, and see the world as no tourist ever could.

WE will select up to 200 students from your graduating class to enjoy this privilege. But YOU have to make the first steps. There is an application process that must be followed and it takes time and effort. Applications for Fall 2011 and Winter 2012 have to be completed before the end of lectures this term.

To qualify for exchange, you need an average of at least 70% for the three terms immediately before the exchange and you will need to show that you can be a good ambassador for your program, for Waterloo and for Canada as a whole while you are away. In some cases you will need to learn the home language of the exchange partner.

We can help you get prepared. You need to visit our website, *www.eng.uwaterloo.ca/~exchange* to learn about the various destinations and the details of the application process. The Faculty Exchange Office is also at your service. Just drop by CPH 1320 to sign up for a meeting with Cindy Howe, or to make an appointment to meet me.

If you're unsure about foreign languages, (or French, which by the way is NOT foreign but is an official language of Canada), you really don't need to worry. Our partners in Finland, Sweden, Norway, Denmark, The Netherlands, Turkey, India, Singapore and Hong Kong all provide instruction in English. In France, Germany and Switzerland you can get special language courses before the beginning of term, and there are technical electives taught in English. Naturally, you would be better off knowing something of the local language, and there's still time to take a course or two here before leaving. Only in China, Korea, Japan and Taiwan is it really critical to make yourself as fluent as possible. But in any case, just think of the long-term advantage of being able to read and write a second or third language.

Are you concerned about costs? Don't let money put you off! First, there is some financial assistance available. Second, you are giving yourself international experience – your increased earning capacity will make the payback time quite short.

Finally, if you are unsure about exchange, talk to returned exchange students who are now in fourth year. Cindy Howe, in the Exchange Office can help you find them.

Exchange isn't for everyone, but it certainly can be for you. Check it out!

From the Desk of the President...

TIM BANDURA
PRESIDENT

Hello Everyone!

For those of you who haven't met me, I'm Tim Bandura and this is my first term as your President of the Engineering Society. I'm in 3B Mechanical Engineering so not only do I look forward to helping all of you, I am also looking forward at my design course and the trebuchet I get to build!

Our first meeting was on Wednesday the 22nd. Aside from a few issues, it went pretty well! There was plenty of food for everyone and I'd like to thank Mike McCauley for running a tight show. Another huge shout out goes the Anish Bhutani for taking meeting minutes!

I gave a report on my goals for the term and I'd just like to talk about a few. My first goal is to ensure that we, as an executive team, work well together and provide you all the best of our efforts. We hold weekly executive meetings to provide regular updates and evaluate our progress. If you have any questions or concerns, please let me know! Another one of my goals is to increase our visibility. Sometimes, I feel that exec isn't always visible or approachable so I'd like to change that. I'd like to drop by all your classes informally throughout the term just to see how you're doing. As another one of my goals, I want to look at how to promote growth and long term planning in our Engineering Society. If the Faculty can have five year plans, why can't we? My initial plan is to look at the creation of a mission and a vision statement, as well as a list of possible long term plans. If you have any ideas, please talk to me! This can't be done by only one person. You all have a stake in the Engineering Society and a say in where we go. Our policy manual was written and passed just over a year ago. There are many gaps and conflicts with it, as is true for any new governing document. I'd like to review it with a group of students to clean it up. If you are interested, keep an eye out for more details. This will probably start after midterms.

I'm happy to report that the statue in the CPH Courtyard will stay purple as opposed to its typical orange! In other words, I attended the Engineering Faculty Council meeting. This meeting is the highest level of decision making within the Faculty of Engineering. The Chairs of each Department sit on this committee along with the Dean and several associate deans. I can report that this fall the WEEF Lab computers were fully renovated and that later this fall Helix lab (RCH Basement) and the Electrical Commons Lab (E5) will be upgraded and finished. I also attended the Engineering Student Society's Council of Ontario (ESSCO) President's Meeting after the first week of school. This conference was a chance for the Presidents and Vice President Externals meet and share thoughts and procedures with each other. Leah will report more on this, but I just wanted to briefly update you all that I met with the other Presidents from across Ontario. We had a good two hour discussion on dealing with Dean relations and dealing with our main campus student societies (like FedS for us). Needless to say, Waterloo is one of the best schools as far as relations between groups go.

I'm interested to hear what students' thoughts are on these topics and any other ideas/ concerns you may have. You can find me in the office or email me at *asoc_prez@engmail.uwaterloo.ca*. I hope to hear from many students this term, and get to know how people feel about on and off-campus issues. One final thing from your president, please visit our brand new EngSoc website, found at *engsoc.uwaterloo.ca*.

Off to a Great Start!

ERIC COUSINEAU
VP EDUCATION

This is my first IW report as VP Education, so I would like to say thanks for giving me this opportunity! I'm about 5 months into the position, and I've loved it so far. I do my best to gather feedback on issues where I foresee controversy, so listen for that on the mailing list and at EngSoc Meetings. Be sure to read my other article entitled "What's Been Happening with WatPD Engineering?" to hear more about WatPD Eng.

CEC (Cooperative Education Council)

The role of this committee is to discuss cooperative education related issues and initiatives. Recently, it was expanded to include a student representative from each faculty. CECS has been working hard to create an improved version of Jobmine, codenamed Waterloo Works. It is in a pilot testing phase until the Winter Term, when a larger test user group will be used. It is currently set for launch for the Spring 2011 term. This is very good news!

At the EngSoc Meeting last Wednesday, I reported on a CECS initiative to eliminate minimize unpaid coop jobs. I wanted to clarify a few things in order to make sure everyone understands the situation.

On campus there are a significant number of unpaid positions, largely in Engineering. CECS plans to minimize/eliminate unpaid positions as soon as feasible, to comply with coop accreditation requirements and a marketing "promise" of paid employment. This is primarily for off-campus jobs right now, though on-campus jobs may be a consideration at some point in the future. For off-campus jobs, CECS reviews unpaid positions on a case by case basis and requests input regarding possible exceptions or special circumstances. Students raised several concerns regarding economic conditions, charitable organizations, and other considerations. Following this discussion CECS agreed to take our feedback and create a set of guidelines on exceptions and special circumstances to present to the CEC for consideration.

I hope this clarified the situation and rationale behind the initiative. I will update you guys after the next meeting; hopefully our concerns about the value of experience will be reflected in these guidelines!

Goals

Increase transparency of departments to students

I plan to talk to department to see what they can do to help students better understand the department specific policies that they are subject to. I believe this is important because nothing currently exists that informs students of department policies relevant to them other than infrequent verbal communication, at least none that are widely available.

Put a student submission to vision 2015 into motion

Since Vision 2015 is focused on undergraduate students, I would like to work on drafting a student submission to the Dean's Office to tell them which issues are a priority for students. This submission would ensure that the Dean's Office better understand what students want, and what needs improvement.

Report on each committee, even if nothing controversial is happening

This is my plan to increase transparency of the representation EngSoc provides. In the past, committees have only been mentioned when something important was happening. I would instead like to report what each committee is doing so that you know I haven't dropped the ball and stopped attending or something like that.

Take a proactive approach to improving academic services

I would like to proactively seek out exams and outstanding work reports. I believe that doing this will help make our exam and work term report banks more comprehensive and useful.

Milk Flasks and Pleather for All

MARC TAN
VP FINANCE

Hey A-Soc,

This is my second exec report. Isn't it amazing I've made it this far? Some updates from my two week in Office. BUDGETS WERE DUE MONDAY! So if you didn't already get it in, that's a shame. Last week's Novelties sales were the best we've ever had in a fall week. Congrats to all our novelties directors for doing a fantasmic job! Also, as I mentioned, I am looking to get engraved milk flasks and pleather jackets. If you are interested in either of the above please contact me (via email at *asoc_vpfin@engmail.uwaterloo.ca* or in person) or sign up on the Orifice door. Milk Flasks are going to be about $35 if you are interested. Office Supplies should be on sale soon in the Orifice, I promise. Also, an update if you were not at the meeting; A-Soc will be making a capital purchase for a piano keyboard this term. I am currently still waiting on B-Soc's reply to see if they are willing to fund the other half of the capital. I'll update all of you on this in my next report. That's about it from me for now, see you all at my next exec report (if I make it…)!

What's Going On, POLE INCLUDED!

SEAN WALSH
VP INTERNAL

Hello and welcome back A-Soc! Also, welcome to A-Soc for all of the first years! I hope everyone had a great summer and an awesome first couple of weeks. For starters, a BIG thanks to everyone who attended the recent EngSoc events such as the first Coffee House of the term, the trip to St. Jacobs, last Friday's Charity Grillfest and the EngSoc Day at the end of O-Week.

As for upcoming events, be on the lookout for advertising regarding the following events: TalEng, Exchange Student Night (in POETS), Enginuity, EngPlay auditions, a colouring contest, MORE Frosh Mentoring, MORE Coffee Houses.

Furthermore, some of you might remember that in the first EngSoc Meeting this term I spoke of getting more feedback from all of the Engineers out there through the use of "poles". So today I introduce the Plummer's Opinions Listed to Exec, aka the POLE.

This Issue's POLE: What do you think of the Engineering Society Council Meetings?

Please email your responses and any other questions to *asoc_vpint@engmail.uwaterloo.ca*. I look forward to seeing everybody out at the upcoming events and hope to hear from you!

Regards,
Sean Walsh

WEEF is Good!

PRAVEEN ARICHANDRAN
WEEF DIRECTOR

Welcome Frosh and returning students! This year is a very exciting time for the Waterloo Engineering Endowment Foundation. We have just turned 20 years old and things are looking better than ever. With our capital fund having surpassed the $9.2 million mark last term and the results of our largest contribution, $1 million to the construction of the E5 Student Design Centre beginning to shine through, it is no wonder that more and more students are showing their WEEF pride through stickers, shirts, buttons and other WEEF swag.

We have a valid reason to be proud, too. WEEF is the largest student endowment in Canada. Funds are raised primarily from student donations and all funding decisions are made by the students, for the students. Supporting WEEF is an amazing way to invest in Waterloo Engineering and protect the value of our UW Engineering degrees. Twenty years from now, the value of our degrees won't be judged based on what we are doing today. It will be judged based on what UW Engineering is doing at that time. Our contributions and support of WEEF will definitely ensure that the future of engineering at UW remains as bright as ever so that we can keep our reputation as one of the top engineering schools in North America and stay competitive in a global market.

Proposals for funding will be due October 22nd this term. Returns are available until October 1st. Keep an eye out for posters as well as more WEEF swag and events. We do have a lot in store for you this term.

If you have any questions or would like to get involved with WEEF, feel free to email me at *weef@engmail* or stop by the WEEF Office (WEEFice).

Conferences? Charities? WIE? Read On!

LEAH ALLEN
VP EXTERNAL

Hey All!

To the upper years, welcome back to campus and to the first years, welcome to your new home! It is great to see all of your wonderful faces reading my article.

There has been a lot going on the VP External front lately, so hold on tight. Back in June myself, Tim Bandura (Prez), and an A-soc delegation attended ESSCO Annual General Meeting. What is ESSCO? ESSCO is the Engineering Student Societies Council of Ontario and they are like the EngSoc of the all the student societies in Ontario. ESSCO AGM sparked a lot of ideas on how to improve our Engineering Society, which may bring some changes in the coming months. At this conference new ESSCO executive were elected, among them is our very own Alessia Danelon (President) and Cameron Winterink (VP Development).

Two weekends ago Tim Bandura and I attended the ESSCO President's Meeting. At this meeting a new LIAC topic was selected entitled "Implementation of Soft Skills in Engineering". So what is LIAC? LIAC is the Lobbying Issues and Action Committee and they select a topic to research and lobby issues related to the topic on behalf of engineering students in Ontario.

This coming weekend, Kevin Ling (B-soc VP External) and I will be attending CFES (Canadian Federation of Engineering Student's) Presidents Meeting. CFES is similar to ESSCO but they represent all the engineering student societies in Canada. Hopefully we will be attending some workshops relevant to our EngSoc, and can bring back some new and exciting ideas.

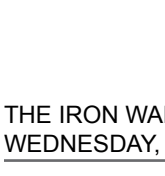
APPLICATIONS ARE NOW OPEN FOR PEO-SC (Professional Engineers Ontario Student Conference). PEO-SC is a great conference and I highly recommend it to anyone who is proud of the engineering profession and would like to learn more about what it means to be an engineer in Canada. The conference will be held at the University of Toronto on November 12 - 14. If you are interested in attending, please send me an email or visit the website for application information.

On the charity front, the charity directors will be a serving pancake breakfast bi-weekly all term and the next one will be taking place on the 7th of October from 8am - 10am in the CPH foyer. Last week the Charity Grill Fest brought to you by your executive team and the charity directors raised $1000!! This will be going to Free the Children to help build a school in India! Another charity event happening this term is Halloween for Hunger, where participants will get dressed up and trick or treat for can goods. If you're interested in participating, make a group of 6 - 8 people and sign up on the Orifice door in the coming weeks.

Women in Engineering is hosting a Grad Studies talk today from 12:30 to 1:30 in RCH 208, please come join if it's not too late. Did I mention lunch will be served?!

That's all for now! If you have any questions/comments please email me at *asoc_vpext@engmail.uwaterloo.ca*

The New Proposed Orientation Program



JAY SHAH
SENATOR

For those who may not know, UW has a senate. Similar to national governance, the Senate at Waterloo approves University policy after it has passed through the various levels that operate beneath it. It is the second highest policy considering body, the highest being the Board of Governors (the Board and Senate handle distinctly different matters). If you are interested in university governance and getting involved at the Senate level, my term as Senator ends May 2011, and elections will be held in Winter 2011. It doesn't matter what year you are, as long as you are in engineering, you can apply! Email me (*senate@engmail*) if this interests you, we can discuss the roles/responsibilities more.

Some interesting statistics:

Engineering Enrolment for 2010 is 103% of target, meaning we are 3% over enrolled. In contrast, UWaterloo's enrolment as a whole is 109% of target.

Undergraduate tuition in Ontario was up 5.4% year over year, for an average dollar amount of $6307 (annual). In contrast, Graduate tuition in Ontario was up 10.6% year over year.

United Arab Emirates Campus Statistics:

2009 = 21 Students, 20 of which made it to 2A

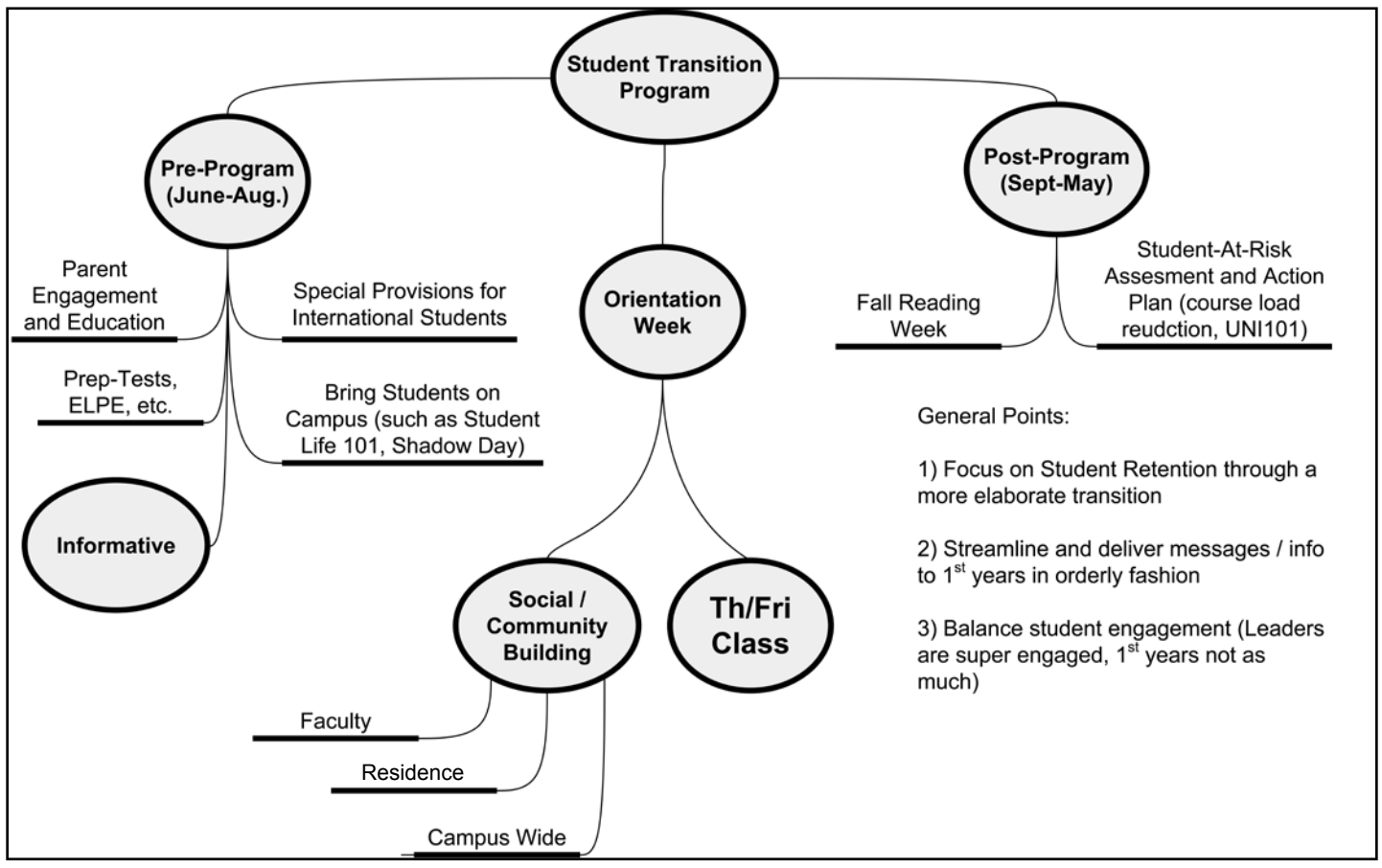
2010 = 81 new students accepted

There are 8 Faculty, 4 Staff, 3 TAs, 1 Co-op Coordinator in our UAE Campus

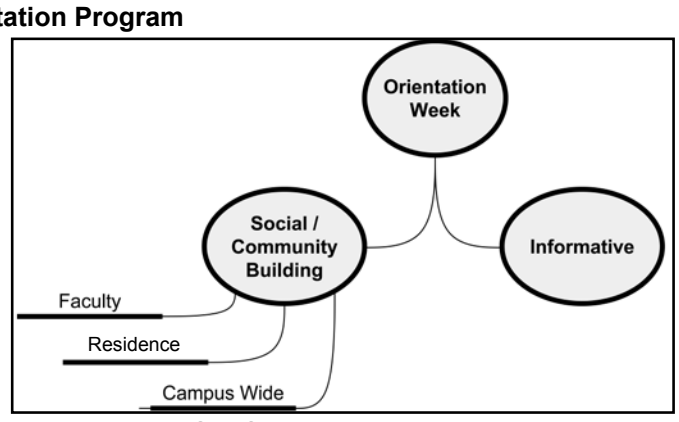
NEW STUDENT TRANSITION PROGRAM

DISCLAIMER: All information in this article is what I am piecing together from verbal conversations; a formal written report/presentation from the administration will proceed in October to clear up many details.

At the last EngSoc meeting I 'spilled the beans' on some details of the vision that the UWaterloo administration has for how we should be transitioning students in their first year. Many will remember that last year there was a proposal before Senate to start classes during the Thursday and Friday that we would have traditionally been doing O-Week activities in. This proposal did not proceed, largely in part due to the strong student opposition and the concerned ear of Provost Feridun. This year, discussions have started on how the university plans to do better with student transition. The vision changes the transition as we have known it for many years into something much bigger, much broader, and much more encompassing. There are of course trade-offs to accomplish a lot of what is being proposed, one of those trade-offs is that the proposal does include classes on the Thursday and Friday of O-Week. The structural changes to the transition process can be seen in the two associated figures. I have tried to sum up the 'big points' below:



New Proposed Orientation Program



Old Orientation Program

1) Concerning O-Week itself, move-in will be bumped up a day. All 'informative' style activities will be moved into the new "Pre-Program", and Thursday/Friday will be 'soft classes'. The idea being that these classes aid in getting students introduced to academic life at Waterloo, not necessarily the start of course material. Thurs/Friday evening programming is do-able. It is important to note, that Upper Years will also be required to attend their classes on Thursday and Friday, their classes will not be 'soft classes'.

2) The Pre-Program is intended to engage students as early as possible, right from when we confirm that they intend on coming to our university. It will help parents learn what they need to know to support their children through University (potentially even allowing them to see Single & Sexy). Prep-tests will be moved into this area, potentially including an online ELPE. Students will be invited to campus to do a lot of the informative style activities that, as we know it now, still reside during O-Week.

3) The Post-Program will support first year students academically in a profound way (and help upper years too). A Fall reading week will be introduced to give students a much needed break and a change to recoup and reset their trajectory if things weren't going well in the first bit of the term. New facilities will be put in place to identify as early as possible students who are at risk academically, and support structures will be made more available. To support students who struggled with 1A, they will be able to have a reduced core course load in 1B while taking on an extra UNI101 course that would help them improve the skills they need to succeed going on without struggling as much as they did in 1A.

Something that has been very comforting to see is the rationale for all these changes. Last year, the rational was that we need 60 teaching days and that because Labour Day can move around so much it makes certain years really difficult to reach the 60 days. While this is certainly a legitimate logistics problem, the solution to truncate the orientation/transition program did not seem appropriate.

This year things are differently, and in radically positive way. New initiatives including the creation of a Director of Student Success are all in the name of exactly that, student success. A huge driver to the sweeping changes we are seeing in the transition program are all based on a desire to help students transition and succeed in their first year and beyond. A lot more implementation details will be available in October (things like the timeline for implementation, who will implement/lead certain elements, logistical details); everything here is my best attempt at summing up what we do know.

I have no doubt that there are certain elements that the student body may be uncomfortable with, so let's cut all the emotional attachment and drive down into the real purpose: student transition and student success. Let's figure out what works, what doesn't, and why not. Let's not be attached to the past simply for the sake of being attached to what is familiar. If we come together and think about this and really decide that what is being presented is not good for the students then so be it, but let's decide that like true engineers: completely and totally objectively.

Mitch Armstrong

A Week Filled with Fun, Challenge...and Popping Cherries?

SPENSER GOOD
1A MECHANICAAL

When I first came to the University of Waterloo, I was more than a little anxious of what was to come. I was told by many that I was entering a serious program with serious people who were serious about their education. The seriousness of Waterloo engineering could not be forgotten. So, needless to say, I was a little surprised when I learnt that the event in junkyard wars in which I would be taking part in was called "Pop the Cherry". It was funny, granted, but it hardly fit the image of stone-faced seriousness I had come to falsely associate with engineering students at the University of Waterloo. We stood attentively as we were lectured on the important skill of popping cherries by EDCOM, and then sent off to complete our task. The task, for those of you who don't know, was to construct a device that could pop the 'cherry', which was in reality a red balloon attached to a fifteen foot string floating in the air.

We set off to our task with a smile on our face, for how hard could it really be? Hah, yet another blatant instance of frosh naivety. My teammates and I began to run around looking for sources of wood to build the fifteen foot arm required to reach the cherry....or balloon, whatever. After gathering our materials we swiftly broke apart old chairs, tables and armoirs in order to obtain the wooden shafts we needed for the device. Once the wood was gathered we nailed it together quickly, and hallelujah! We had our fifteen foot long arm.....or so we though. It was a good thing EDCOM, in their almighty wisdom, hadn't instructed us to build a bridge, for once we picked up our creation it snapped in half, unable to support its own load. Fortunately, we fixed the problem with some engineering ingenuity by reinforcing the linkages between the blocks. Unfortunately, we were informed we were almost out of time and still had to attach a basket at the end of the arm to catch the balloon. It was then that I learn one of the golden lessons of engineering, when you don't have time to do it right, do it half-assed. We jammed the basket on and were ready to go.

Somehow, our device was one of the better ones in the event, as we were the third fastest team to pop our respective cherry.... or balloon...whatever. Although some of my teammates walked away feeling disappointed with the result, I felt satisfied. I had helped engineer a device to complete a task. I also learnt that although engineering can be serious, it can also be loads of fun, even if it is a challenge. Although I enjoyed all of O-week, I think my most vivid memory will be the gratification I felt when our engineered device popped the cherry...or balloon. Now I get Waterloo engineering. At Waterloo any problem can be solved with ingenuity and hard work..... and sometimes a little humour doesn't hurt either, especially when popping cherries. That's right, cherries, not balloons. I'm just going to have to cross my fingers the general public doesn't get a hold of this paper. We wouldn't want them to think we're in this for fun.

I Passed the First Engineering Test!!!

KIRUSHA SRIMOHANARAJAH
1A ELECTRICAL

Without a doubt, Frosh week was a test. I'm not talking about the ELPE that we had to write Wednesday morning at the PAC. (Was I the only one who realized that the date writing instructions didn't match the example that followed?) On the contrary, the test was impressing EDCOM. Got that? Looking back the HEADCOM/EDCOM/Super Huges/Huges/Bigs created the ultimate life exam for us naive frosh. I mean even before we followed the bright coloured string to HQ that Tuesday morning the test had already begun: think back to packing, saying goodbyes to friends and family, arriving, moving in and meeting your floor mates. I probably met and forgot the names of a hundred people in the first 24 hrs. (I am apologizing en masse for all the names that I mixed up and the faces that I didn't recognize.)

When I finally got to the Light Brown HQ (Savannah) everyone was pumped and the room was full of energy. HQ looked great; the leaders were costumed, animal paintings were on the walls and our fragile but EPIC elephant looked adorable. (Thank you Light Brown Bigs and Huges.) Learning the frosh version of Godiva's Hymn livened up even the shyest of the frosh. EDCOM 2010 made a smashin' debut during the intro video after Meet the Dean. Neither the computer nor the hundreds of frosh in the room saw that coming.

The faculty lunch, which followed the morning events, tasted a little sketchy but that was a small matter compared to how fun it was to meet with other ECE frosh. After lunch we all headed out to earn our yellow hardhats by impressing EDCOM and participating in various activities. Damn the hole in the carpet during ramp building. :@ Who knew so many people could fit in one minivan? The aerial photo was crowded but surprisingly well organized. While crammed between rows, I got a chance to talk to people on my team that I hadn't yet met.

After that first day, everything just began to blur. I went to Boars, Tools and Ties with a girl from my residence in Environmental Engineering and we ended up in a non-moving line for cotton candy. After that we thought it would be a good idea to go to speed meeting upstairs. We ended up getting pretty good seats because we were on the side that didn't move. At some point in the hour and a half we were there we realized what the chances that we were going to re-meet these people were quite slim. Despite this we had fun and nonetheless we continued to meet people until the activity closed and my ears were ringing.

The next morning, I purpled myself. It was a complicated but fun adventure and by the end of it I was purple from head to toe, except for a couple of forgotten spots here and there. Showing up purple to breakfast was an interesting experience; I accidentally left fingerprints all over the cutlery. I then began on my quest to prevent accidentally purpling residence. My stuff, on the other hand, didn't get as lucky. :S

Junkyard Wars was epic. Watching Light Brown's Rube Goldberg dominate was awesome. The pulley mechanism worked, unleashing the shot glass tire combination which knocked over the door crushing junk, finishing with a light going off definitely impressed EDCOM. Delivering Light Brown's mascot to EDCOM was slightly terrifying. I was scarred for life when our giraffe succumbed to EDCOM. In the end it made sense that the TOOL is total DOMINATION. Only about 1604 days till IRS class of 2015!

My mom came to drop of some cables on Saturday and she was standing in front of CPH when I saw her. I'm sure luck wasn't on my side because she was standing outside EDCOM HQ and it took her five minutes and the removal of my hard hat for her to identify me. She just laughed for a good ten minutes when EDCOM interrupted via megaphone with "Put your hardhat back on frosh." Needless to say, mom continued to laugh as I got scolded for not putting it back on properly.

I'm going to skip to Scavenger Hunt which in my opinion was the most enjoyable event of the week. OmNomCom made their debut speaking in a language I could only wish I could understand. Variety meant everyone always had something to do. So much individual talent was put on display. Giant Frisbee was difficult because no one could see and the grass was wet. While teams were waiting to play we did our best to entertain EDCOM. I learned quite a bit from that experience. EDCOM explained to frosh that the environmental science students found their mascot in a dumpster. Other lessons learned include the antonym for phone is pinecone. We made EDCOM laugh beneath their kerchiefs when teams began singing songs censored EDCOM. After spending the rest of the night delivering barely passable acquisitions to EDCOM I returned to HQ to watch Light Brown put on a phenomenal show for EDCOM. Too bad our lion got castrated.

Michael Seliske

Closing Ceremonies, the finale of the week, was legendary. While we waited for everyone to file in we played "What does EDCOM like?" Successful propositions included Don't Stop Believing, WEEF, Pop Rocks, BOAT Racing. The most notable shut down was to the guy who stood up and asked if EDCOM liked crushing the hopes and dreams of the frosh. EDCOM's reply was aww-worthy. The frosh were then able to thank all the leaders that made UW ENG FROSH so special. When EDCOM announced Light Brown as the winner of Scavenger Hunt and our team went wild. I don't think any of us really expected that we would come out on top.

Frosh week will probably go down as one of the most memorable weeks of my life. I made so many new friends and tried many new things. Those of us who made it through the week have passed the first of many tests that will come our way. I'd like to thank all of the Frosh Leaders again for their hard work and patience with the frosh. I hope that next year's first years have as much fun as I did this year.

Bye to The High Week

LYDIA TERISNO
1A CHEMICAL

An exciting week full of new faces, fun activities, and EDCOM! I am entitled to say that it was a "high" week because I was one of the member of Light Blue. How high are we? SKY HIGH! I was so eager to join frosh week and even more thrilled afterwards because it was A-W-E-S-O-M-E.

The first days I was in Waterloo, I had to use the map to get around. The campus is big and the buildings are like a maze. I actually got lost between the engineering buildings and spent half an hour finding my way back to Village 1. Before Expedition Earth started, we had residence orientation and the ice-breaker was great. Every residence had their own cheer and Village 1 Green was full with people from end to end.

The actual engineering orientation started on Tuesday and the bathroom on my floor was packed with people since early in the morning. Most of us are engineering students and we were all too excited to begin our life as engineers (which we knew later on that we are called as plummers). On the way to Student Life Centre from Village 1, I was puzzled by some colourful yarns on the street. They were taped down nicely and each colour pointed to different direction. I just realized that those were the directions to our team headquarter when I saw a bluish yarn leading to my headquarter. The first day of frosh week was important because we would receive our very first hard hat with Engineering Society's symbol on it. But before we could wear it on our head proudly, we had to pass the challenges and IMPRESS EDCOM!

Halfway through the presentation on "Meet the Dean", Windows' blue screen of death appeared and suddenly people with axes, hammers, and chains burst into the hall. They were the legendary EDCOM! I could not express my awe when I saw them. They had cool hairstyles and one of them actually carved the letters "UW" in his hair.

The ritual of earning your hardhat was muddy and wet (fun!). I had to run around with mud inside my socks after the mud pit event. The Bigs were really covered in mud after that because they had to lie down on the mud pit and let the frosh stepped on their back. I guess, running with mud inside my socks was not really considered dirty after I saw the Bigs. Overall, getting crammed into a van (yes, I actually stuck on the left window inside the van), guiding a blindfolded team mate, running through a lava river, and using junks to transfer balls were really some fun ways to earn my hardhat. Our aerial picture would remind us of how awesome the frosh week was!

ELPE on the next day was not actually a event that most people would look forward to, but the night event "Boars, Tools, and Ties" was. I got really dirty after the paint party and it ended at midnight. Imagine doing laundry at 1 a.m. The disposable coveralls did not really help and my bag turned blue after the party. Maybe I was dancing and spraying paint too hard. Thank God it was just water-based paint.

Thursday was another awesome day when we got to play with a lot of junks in Junkyard Wars. The feeling when I got to rip a mattress with a knife was really good. I would never have the chance to do it at home. We were introduced to the TOOL after the Student Teams Lunch and WOW, it was really the biggest wrench ever. At Monte Carlo, I was surprised to see that PAC had been turned to a casino and SLC to a dance floor. It was really worth it to line up for half an hour and freeze outside because a lot of the girls (like me) only wore dresses without any outerwear.

It was really sad to see that engineering orientation ended after Scavenger Hunt. The EDCOM had a great deal of fun during the EDCOM Smash. They crushed televisions and monitors with their big weapons. Light Blue managed to make the EDCOM smile after Scavenger Hunt! Everyone on the orientation committee really put a lot of work to make the frosh week happen. I could not thank them enough for making my first week in Waterloo the greatest one. EDCOM ROCKS AND WE LOVE THEM!

Michael Seliske

Waterloo Aerial Robotics Group

YASSIR RIZWAN
WATERLOO AERIAL ROBOTICS TEAM

The Waterloo Aerial Robotics Group (WARG) is the premier team for large scale aerial robotics at the University of Waterloo. If you thought Terminator 3 was the coolest of the original trilogy because it had the flying robots, then look no further! This fall we have some exciting projects on the go. First, we have WARG's second annual Unmanned Aerial Vehicle (UAV) design competition. This year, we're taking it up a notch! I'll give you a hint: it's meant for upper year and graduate students, it involves airplanes and you get 12 months to do it. We're limiting to 3 teams, so inquire now if you're interested! Secondly, we are participating in the 2011 UVS Canada competition that involves building a fixed wing UAV from scratch and we need some ambitious students to help out! Third, we are sponsoring fourth year projects, and we're always looking for new ideas. Drop by our bay in E5 or post on our forum to contact us!


Mitch Armstrong

Michael Seliske

BOT - A Frosh's Perspective

KIRUSHA SRIMOHANARAJAH
1A ELECTRICAL

It's always welcoming to walk into a room filled with warm friendly chatter, loud laughter and the occasional super villain lookalike. Truth be told, I didn't know exactly what to expect when I showed up to BOT so I brought along a couple friends from Light Brown Team and Saint Jerome's.

BOT, the Beginning of Term party, was held at POETS. Coincidentally we spent Friday Night in Piss on Everything Tomorrow's Saturday. Based on what I've seen and heard, POETS is THE place to be in the engineering quad. For those of you who haven't been in it yet you should drop by between or after classes.

After mingling for a little while I realized that the big Waterloo Engineering is like family, a rather large one and that UW Eng traditions run deep. The lounge provided a homey atmosphere with all its Engineering Spirit. The walls are covered with plaques and memorabilia from various EngSoc and GradComm Events.

The theme of BOT was failed super heroes and villains. Quite a few guests were in decked out in costume, among them a few masked marauders, an evil bear and a balloon guy. The crowd, super villains included, went mad when the TOOL Bearers appeared. In unison everyone in the room chanted the tool bearer cheer as the bearers each chugged a beer. When the TOOL was raised the crowd roared with delight. One of the upper years yelled, "How many days until IRS?" and the responses echoed throughout the room.

The highlight of BOT was the screening of last semester's video. It opened with the disc being stolen by a super villain and then remade just in time for the BOT Screening. The video covered EngSoc and GradComm Events that were held last semester including White Water Rafting, Semi-Formal, DUSTED (Drink Unsuspecting Small Town Establishment Dry), 5 pin bowling, PubCrawl and EngPlay. When the video came to a close many of the guests proceeded to the Post-BOT Events.

Looking back on the Fall 2010 BOT years from now, I'll probably remember meeting new people and laughing during the video while learning about more traditions. For all of you who missed out on BOT, MOT is just around the corner.


Michael Seliske

THE IRON WARRIOR

Friday, March 13, 1998 *The Newspaper of the University of Waterloo Engineering Society* *Volume 22 Issue 4*

From the Iron Archives

Meaning of Life, Orientation Week debate, CASA on tuition rise, and WIE

AMRITA YASIN
4A CHEMICAL

Fall 2005 Issue 1 – September 28

Dan Arnott wrote a very interesting editorial for this issue discussing the meaning of life. He started by saying, "LIFE HAS NO MEANING." According to Arnott, many proposed systems such as religious texts, systems of government like democracy and socialism, arts, and even the principles of science, have failed to provide the ordinary man a concrete meaning of life.

Inspired by an English course, he explained existentialism as the belief that life has no pre-existing meaning and that individuals should seek their own meaning of life. This concept changes "life" from a strict definition to a concept subject to everyone's own understanding.

Arnott apprehended the audience's thinking that seeking the meaning of life is what philosophers, psychologists and people who deal with such subject areas do. However, he argues that the skills that engineers possess, which make them question what is proposed to them and use their analytical skills to reach conclusions, make engineers equally capable of searching for their own meaning of life. People have existentialist theories even if they don't acknowldege it. It might be related to scientific relationships and principles, social relationships or spirituals. Arnott urges everyone not to blindly accept others' views but rather look for their own meaning. Blindly accepting others' views eliminates the discovery process that is integral to finding your own concept.

People are increasingly looking for an underlying meaning in this commercialized world. I believe in pursuing what satisfies one and let the actions speak the meaning.

Fall 1999 Issue 1 – October 1

The piece that I chose to revisit is the editorial for this issue written by Mat Pigozzo. Pigozzo started by bringing out an issue that still haunts students who love Orientation Week and think it is a great way to start university - namely, the administration's decision to shorten it to only retain the informative sessions. According to Pigozzo, the administration proposed this to take the load off the administrative officials who were involved highly with the set up and operation.

Pigozzo didn't stop at Orientation Week and pointed out the fact that environment at UW was changing at an increasing rate and combined with the administration's failure to keep students informed, some students had been having a hard time to cope with the dynamic system. The fault also lies with the students for not keeping themselves informed. As Pigozzo put it himself, "Student apathy is a major area of concern at UW" and considered this lack of concern to be the major reason why even the university didn't feel accountable to students. He talks about other things such as change in fee paying procedures and possible sharing of student contact information with advertisers by UW, to which there was no

Pigozzo ended the article by encouraging students to get involved, to have a better knowledge of what is happening around the campus and to know how to express their concerns.

The reason Orientation Week is still an entire week at UW is because the students have been resisting the proposed changes. The key message to take from this article is to be aware and critical of what is happening and express concern on the issues.

Fall 1995 Issue 1 – September 29

Kataline Princz wrote an article titled 'Real Choices' on the Feds' vote on approving an article also titled 'Real Choices' presented by CASA – Canadian Alliance of Student Associations. This document basically contained four proposals for reducing drastic tuition rises.

The first proposal criticized the provincial and federal governments for cutting education funding. Due to a decrease in government funding, students would theoretically be taking more loans, then spend more time repaying those loans and thus not contribute to Canadian economy. Therefore, the federal government should renew their commitment to a national standard of education and pledge continued funding.

The second proposal calls for the provincial government to increase its hold over university systems. It recommends the elimination of superfluous faculties (schools choose specialties in education and research), increasing distance education, finding alternatives for costly labs, and the overall streamlining of faculties and universities. Moreover, Canada also restricts funding allocations for applied and basic research to remain competitive. Princz pointed out some drawbacks of this proposal: labs are an integral part of undergrad education, streamlining of the system requires time and is expensive. Furthermore, researchers would not be willing to drastically alter their research.

The third proposal instructed universities on how to meet the demands of the industry and marketplace. It instructed universities to teach critical thinking, research, communication skills, forum of business, labour and government representation etc. Princz reflected that while these steps could not reduce the cost, they would ensure that students get their money's worth.

The last proposal suggested a surtax be collected from university graduates whose income exceeded the average income and this surtax be used to subsidize education costs. The flaws that Princz pointed out in this proposal included possible reduction in alumni funding, discrimination as many graduates left the country, exploitation by government and no guarantee that it would reduce the tuition.

Fall 1990 Issue 1 – September 21

Elanie Miller wrote an article regarding women in engineering whose proportion was 12-16%, which, compared to a proportion of 16% in 2009, shows no improvement in the last two decades. Miller stated two reasons for the small proportion of females in engineering: the perception of high school girls of engineering as a profession and the facts associated with actually working as professional engineers.

There was a lower proportion of females in managerial positions (23%) within the 25-39 age group. A survey of American female engineers also indicated that one-third of them felt they were being excluded from the decision-making. Male engineers also earned an average of one thousand dollars more than their female counterparts. However, the Canadian system emphasized hiring based on qualification through which, according to Miller, "the 'systematic' barriers which prevent women from advancing [were] eliminated". On the brighter side, job satisfaction among female engineers was quite high and 80% said they were satisfied with their salary.

According to Miller, although sexist barriers were diminishing, the sexist stereotypes still existed and were a threat to a comfortable work environment.

The less proportion of women in engineering compared to their male counterparts and other faculties is still a much debated issue. In my opinion the need is for a respectful and welcoming environment. Fair salaries and promotions will naturally follow if presence of women in engineering is not seen upon as an abnormal situation.

Canada's New Player in the Social Game Phenomenon

ANGELO ALAIMO
3N ELECTRICAL

Have you ever played a game called Farmville, Mafia Wars, or at least been spammed by your Facebook friends, desperate for you to help out at their "farm" or "diner"? If you have, then you have experienced a more recent genre of gaming called "Social Games."

As all of us likely know, with the advent of Facebook, it has never been easier to keep up with your friends at more hours of the day. Not only can you keep up with your friends, but you can now also play games with them which are embedded into Facebook or other social platforms.

A more recent foray into the social gaming market is a game called "Kingdoms at War" created by the young company, A Thinking Ape. Two of the three founders are actually from Waterloo, Wilkins Chung who graduated from Computer Engineering in 2005 and Eric Diep who studied in the Math faculty before dropping out and moving to California to start a company.

At a recent information session held by A Thinking Ape at the University of Waterloo, Diep explained entrepreneur culture in Silicon Valley of the last few years to a group of interested Engineering and CS students. Back in 2007 and 2008, young coders would rent out a cheap apartment with a few friends and spend their time coding up a project and, once completed, release it on a platform and try to gather as many users as possible. After producing a large user base, these groups of entrepreneurs would then present their idea to investors in order to get funding for their project. After securing funding, the money would then be used to hire more of their friends and build a company around their product.

That's kind of how A Thinking Ape got started. First, Diep's partners were developing chat technology which they deem as "IRC 2.0" in the form of a product called "chatterous" which had funding from Angel Investors. At the same time, Diep was developing games and they decided to experiment with combining the chat technology with the social game. After two months of developing time, the game was launched on the iPhone in September 2009. It took the group of guys a couple months before realizing their product was on to something and had the potential to be very big.

Around November of 2009, a decision was made to move the company to Vancouver, as the city is seen as a hotbed of game development. One year after launching their game, A Thinking Ape now has 1 million active users and that number is constantly growing with the company now being funded off revenue from the game. Not only is their game growing in numbers, but also is their company. The company is actively hiring out of Waterloo to build up their ranks of game developers. Because the company is a start-up, Diep told the crowd that the earlier people join the company, the bigger the piece of the company they will receive.

If you're a motivated individual and want to get into the game developing market, be sure to check out and apply to A Thinking Ape. The company is set to release three more games in the near future which are likely to be as successful as Kingdoms at War, if not more so. The young founders are very confident A Thinking Ape will be one of the largest tech companies in Canada in a short few years, so if this is something you're really interested in, now is the best time to get involved!

On Your Plate: The Fresh Fifteen

ALISON LEE
2A NANOTECHNOLOGY

Attention foodies! On Your Plate is a new column about all things food-related. This includes local events, weird and wonderful dishes, cooking adventures, healthy eating advice, and anything else to do with what we eat. This week, we explore the oft-neglected and underrated world of fresh produce.

Expanding waistlines isn't the only health problem facing the average university student. Too busy, too broke, and too lazy are common excuses for bad eating habits. Here's the thing: if you buy fresh food, especially when shared in bulk, you're not paying for the extra preparation and packaging of pre-made meals. You control the taste, nutrition, and ultimately your health. So here's a challenge: avoid the frozen dinner aisle and go back to the basics. I offer you fifteen tips and tricks to get started. Ditching the Frosh Fifteen for the Fresh Fifteen habits might just make you feel amazing.

1. Tis the season! Fall is the best time of year to get a huge variety of fresh produce. Most grocery stores feature Ontario produce on sale when there's a good harvest, so take advantage!

2. To extend the life of your fresh purchases, look up the best way to store it. For example, tomatoes are kept best at room temperature, and veggies go bad faster in the fridge if you wash them before storing.

3. Go for the double rainbow. Fruits and veggies come in all colours from red to purple, each offering different combinations of nutrients. As a general rule, mixing up the colours in your diet should provide a healthy spectrum of vitamins and minerals.

4. *realfoodmovement.ca* – This website is all about exploring food through taste, education, and community networks. Get inspired to eat healthy and feel good about yourself. Watch the video, if not for the awesome animation.

5. The farmers market in the SLC every Thursday is affordable for produce and bread. If you want a better selection, try the Kitchener or St. Jacobs markets (they also have apple fritters and danishes the size of your face).

6. No artificial colours or preservatives. With fresh produce, you know it's natural because it hasn't been processed. Although DO wash your stuff before eating it because some farmers use pesticides and there's plenty of chance to pick up germs during the harvesting and transporting process.

7. Easiest snack ever: piece of fruit. Apples in bulk are super cheap and won't get all beat up in your bag. Also in season: peaches, nectarines, pears, melon, and plums.

8. Ever wanted home-made fries but were too lazy to peel potatoes? Then don't! As for many spuds, stem tubers, and veggies, a great deal of nutrients lie just beneath the skin. The skin is also full of fibre, although that still doesn't make fried potato skins healthy. Sorry.

9. BBQ season: it's not just for meat. If you've got it fired up, might as well throw on some zucchini, corn, peppers, eggplant. (Btw, major thumbs up to EngSoc's Charity Grillfest!)

10. No one likes being sick, so be good to yourself and get your phytochemicals and antioxidants through fresh produce. It's not all about hyped-up (and expensive) 'superfoods' like pomegranates and blueberries. There's also broccoli and tomatoes.

11. Remember on the Magic School Bus when Arnold turned orange? It was all that carotene in the Seaweedies. In reality, carotene won't turn your skin orange. It promotes healthy eyes and skin, plus it enhances immunity. Baked sweet potato fries anyone? Apricots and carrots work well too.

12. Real food trumps supplements (sorry, Flintstones fans). For example, if you want vitamin C, you can pop a vitamin chew or you eat a juicy orange. The orange also gives you fibre, water, and a broad spectrum of other vitamins. So would a grapefruit. Or a kiwi.

13. The Popeye diet? Not quite that simple. Iron keeps up your stamina and alertness, but the non-heme iron that's abundant in plants like leafy greens isn't absorbed very effectively by the body. Consuming vitamin C also boosts absorption.

14. The Greater Good: Local produce often has a smaller environmental footprint than imported, processed, and packaged foods. This saves resources like water and fuel, supports the local economy, and brings communities together.

15. If you are reading this list on the toilet, think of the time you could be saving if you had gotten more fibre from fresh fruits and veggies. Try peppers, pears, broccoli, apples, bananas, and oranges for starters.

Advice for First Years

JON RADICE
4A CHEMICAL

Waterloo is a big University. Waterloo is an even bigger town. Don't forget that there is a live, vibrant, buzzing town all around you to go explore. And I recommend you do. Waterloo has a lot of stores and events that I, as a country bumpkin in my pre-university life, never had the luxury of in my town. From Oktoberfest to Buskerfest, from Taco Tuesday's at Ethels to Retro Sunday at Phils, Waterloo offers a lot of fun, but only if you're willing to explore it. And don't forget that you have another university right down the street; the people there can be a ton of fun if you give them a chance.

FARZI YUSUFALI
2A NANOTECHNOLOGY

Despite the huge workload that accompanies university life, do as many extra-curricular events or join as many clubs as you can. Not only will you learn valuable skills like time-management and such, you'll actually have a chance to have fun while in UW!

If you don't get something taught in class, ASK FOR HELP! While you may be sitting there now with your pride intact but completely clueless, you don't want to be the guy who has to re-teach himself everything come exam time.

MADELAINE LIDDY
2A NANOTECHNOLOGY

Co-op tips: The Interview

Once you've reached the interview stage, there are some key things you should remember to do and not do during the interview. The most important: don't make things up! Employers remember a lot from your interview and you don't want to be caught lying. Other things to think about before your interview are stories or anecdotes related to elements on your resume. For example, if you have something listed under work experience, have a story associated with it to pull from during your interview. Finally, remember to relax! The interviewers on the other side of the desk are just people too!

KATE HEYMANS
2A CHEMICAL

Live without Regrets!

Anyone who knows me will tell you that I'm generally shy (I barely said two words during my first week of co-op). So my advice for all you shy people out there: let go of your inhibitions and just enjoy life. Sure you will be embarrassed by the crazy things you get dragged into, but in the long term you're more likely to have fun by being part of the general shenanigans than you are doing homework. A week after when you're overwhelmed by midterms it might seem like a horrible idea, but six months later it might be remembered as the greatest fun you've ever had. The hidden bonus? You'll make life-long friends. You'll make mistakes along the way, but what would life be without a little risk?

Go to POETS!

You've probably walked past that door a dozen times by now. There are always people in there and when you walk through the door it seems like they are all staring at you. To be honest, they are probably just looking at the big screen above your head... or they are really staring at you. Smile and just walk in. Sure the couches seem like they are all full of lounging people but nobody will bite if you ask to share a tiny corner. The couches are also magically expandable; the more people who want to sit in them... the more seating will be provided by the couch. (And mad props to Graeme Scott for that idea)

ANJALI GOPAL
2A NANOTECHNOLOGY

Stalk your professors (or TAs)

No, seriously. Find out their e-mails, office hours, (and if you really want to creep them out, their phone extensions). Having your professors' and TAs' contact information can save you the trouble of spending ten hours pondering over a murky course concept. Instead of wasting excessive amounts of time on one assignment question, ask a TA or a Prof for some guidance instead—you can be amazed at how much they can clear things up. Moreover, the majority of your professors and TAs are incredibly helpful, especially if you see them during their office hours. (If none of that convinces you, just think: you're paying these people up to $4000 per term to teach you anyway—don't flush that money down the drain by refusing to ask for help.)

IOANA CRAICIU
2A NANOTECHNOLOGY

It's hard to identify where all your bits of tuition money go; it might even be impossible. However, at least some of it goes towards a plethora of services. Almost everything you get for "free" has been funded, in part, by you. So get your money's worth. Book POETS, read this free newspaper and get cheap food at the C&D. Use free counselling, the shuttle and the free phone in E2!

Point Vs. Counterpoint

Should Waterloo Stop Fluoridating the Water?

POINT

JON RADICE
4A CHEMICAL

Fluoride in a water supply is just one of those facts that make sense when you hear it. The active ingredient in toothpaste is fluoride, so adding a small amount of fluoride into the water system can help clean teeth without providing any health hazard to the public. Introduced to Ontario in 1945, almost 75% of Ontario households have fluoridated municipal water. And the recorded instances of dental maladies have dropped dramatically from the mid forties to today. But can fluoridation of water be the only reason for this, or can better advances in dental hygiene take the majority of the credit?

There is far from a worldwide consensus to implement fluoridation programs in water. Where places like the United States and Ontario have a high percentage of people using fluoridated water, Western Europe, and even specific provinces in Canada have incredibly low fluoridation numbers. One study looked at the cavity rates of people in Ontario (75% fluoridated) and Quebec (6% fluoridated), and found a very minimal decrease in tooth decay in children aged 6 to 19. Ontario kids averaged about 0.3 cavities less than the unfluoridated Quebec children. When looking at adults, the difference was erased, with the Quebequois having slightly more than Ontarians, but not an amount that is statistically significant (7.98 to 7.94 cavities on average). With such a disparity in the amount fluoridation numbers, you think there would at least be some statistical variation in users. European countries such as Finland and Germany have noticed similar cavity rates after discontinuing use of fluoride in their water.

When fluoridation was put into place, dentists believed that the ingestion of fluoride in drinking water would aid in strengthening tooth enamel from the inside out. However, later studies showed that only the topical application of fluoride provided any dental health benefit. This is where information begins to get murky. Unless you are swishing your drinking water around in your mouth, you are getting very little contact time, especially compared to tooth brushing. There are many conflicting values when trying to figure out the optimal fluoride concentration for dental health. The US government specifies that a concentration of 0.7- 1.1 mg/L is needed however, the World Health Organization states that any more than 1 mg/L would lead to dental problems such as fluorosis (those white spots and weakened enamel on teeth). The city of Waterloo says that it maintains fluoride rates of 0.5 to 0.8 mg/L; depending on which report your read, this concentration is nearly outside of the range of dental health.

The government of Canada states that groundwater sources with concentrations of fluoride greater than 1.5 mg/L can pose a health risk, especially to infants. The funny thing, though, is that southern Ontario is the only place in Canada that is noted to have natural fluoride concentrations higher than this threshold. For you Geos, you can thank our generous limestone and fluorite deposits for the influx of halogens in our water supply. However, this is very regional and watershed dependent and no reliable data could be found for regions around the Waterloo Region.

Fluoridation of water is also a waste. With the amount of water used for other applications, we are just passing fluoride through the system, and letting it out into the environment. The accumulation of fluorites in water sources, combined with the naturally high fluoride concentrations, can lead to many towns downstream of Waterloo that rely on well water to have dangerously high concentrations that they can't purify. The fluoride source used, hydroflouorosilicic acid, contains trace heavy metals, namely arsenic. Arsenic is a single-point carcinogen, meaning that even one molecule of it can cause cancer. Introduction of this into the water source, no matter how small the concentration, can pose another cancer risk in our already cancer-filled lives.

Fluoridation had a very important impact when it was first put into place. However with an increase of dental hygiene, an awareness of dental maladies, and an increased frequency in dental visits, it is quickly becoming obsolete. It's not that fluoride poses any real specific danger, it is more like there is no benefit with adding fluoride to the water supply. When you can't see a benefit, there just might not be one.

COUNTERPOINT

ANISH BHUTANI
3B CHEMICAL

They should not stop fluoridating the water in the Region of Waterloo. It is a practice that has been going on for over 40 years in the region and has never caused serious problems for students or the residents in the area. While it is known that fluoride is dangerous in large quantities, as is almost any chemical, the concentrations in the Waterloo Region are under 1ppm (1 mg/L) and as such does not cause harm to people.

The goal in adding fluoride to water is that fluoride helps children and adults reduce cavities by helping strengthen their enamel. Over the past years, tooth decay has become a problem for more and more people, due to changes in diet and people being too busy to properly take care of their teeth. In allowing the Region of Waterloo to fluoridate the water, it allows those who do not take full care of their teeth to still be able to maintain some dental health.

Bacteria on your teeth produce acids when they ingest sugar or any other carbohydrate, which causes tooth decay. These acids then begin to break down the outer layer and the enamel of a person's tooth. When too much of the enamel is dissolved, it becomes a cavity. By using fluoridated water (or toothpaste or anything else with fluoride) the saliva in your mouth increases its concentration of fluoride. Fluoride works to slow down the process of the acids breaking down teeth, so that it may be possible for the enamel to build back up before more acid comes in.

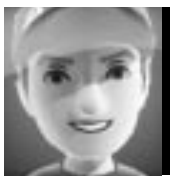
One concern that has been brought up is that the chemical used to add fluoride to water, hydrofluorosilicic acid (H_2SiF_6), is considered dangerous. Water which has been fluoridated has higher concentrations of lead, arsenic and other heavy metals. While this may be the case, keep in mind that there have never been reports on major incidences of lead or arsenic poisoning due to drinking too much water. I could not find a study about the concentrations of these contaminants in the Waterloo water supply, but there is no evidence that it has previously been a problem. There does not appear to be the need to focus on the topic until the cases of poisoning start increasing and can be correlated to the drinking water.

Many health organizations also support the use of fluoride in city water supplies. These include Health Canada, The Canadian Dental Association, the Food and Drug Administration of the United States, and the World Health Organization. When it comes to almost every health aspect of our lives, we trust that they are making well-informed decisions based on scientific data. Similarly, we should trust that they have done the appropriate research demonstrating that fluoridating a city's water supply is beneficial to the community.

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

The Future of Gaming

Run for the Hills!!!! Motion Control is Coming!!!!



JON MARTIN
OBI JON1138

Microsoft and Sony Enter the Motion Control Ring to Compete with the Nintendo Giant

Hello everyone and welcome to another term! I'm on a work term now so I can be happier about it – no homework (except PDEng) and more time for gaming! Anyway, I want to say welcome to all the new plummers within the UW Faculty of Engineering. I hope you all enjoyed Frosh Week, I had a blast – Go Pink Team!!!

So, on to the actual column. The Future of Gaming is meant to draw attention to new consoles, peripherals, technology and ideas that are affecting the world of video games. It doesn't focus on specific games, since there are so many different genres it would be impossible to talk about something that appeals to everyone. But the consoles themselves we can agree on – or at least we can all pick our respective camps and respectively insult each other for our buying preference. I strongly believe that each system, the Nintendo Wii, Sony Playstation 3, and the Microsoft Xbox 360 are such individual systems, with different genres of games that there can never really be a "best of the best," it boils down to which is the best for you. So that was my spiel about my focus and style – feel free to send me your opinions, but understand that if you insult me for owning a 360 I will just delete the message. I'd buy them all if I could.

Now the meat of the article. No doubt many people have already heard about the release of Sony's 'Move' controller, which was released earlier this month. The controller in its simplest form utilizes the existing Eye camera and the new Move controller for motion capture gaming. Optionally a second handheld controller, dubbed the 'Navigation' controller can be added, or the existing gamepad can be used. I think this new system is going to be very effective in bridging the gap between the Wii and the high definition consoles, something that Nintendo definitely should be scared about.

Microsoft will be releasing their own motion controller in November, called the Kinect (what is with these names?) which promises controller free gameplay using a motion capture camera. The system is also capable of voice and facial identification. There have been a lot of rumours about the lag and inaccuracies of the Kinect, due in part to the lack of a controller with gyroscopic systems (basically what Sony and Nintendo both use). In a recent interview it was revealed that a controller could be implemented in the future to complement Kinect and increase its capabilities. The price of Kinect has been pretty much set at $150, which seems high, but it is a onetime purchase that can accommodate multiple players without the need of buying more controllers.

I haven't really said much about Nintendo, which I think is a bad sign. The sales of the Wii have slowed drastically in the past year – as everyone on the planet who wants a Wii has already bought it. Nintendo originally took the gaming industry by storm through the introduction of motion control game play, other than that the Wii is really just a game cube. Now that Sony and Microsoft are both entering the motion control market, with high definition graphics and much higher quality games, Nintendo needs to pull another ace out of their sleeve if they want to stay in the market.

I recently had the chance to see both Move and Kinect in action at the FanExpo Canada convention in Toronto, on August 26-28. FanExpo Canada is a combined convention of sci-fi, comics, horror, anime, gaming, and lots of stuff in between. I have to say the Steam-punk and 501st were really amazing – that is dedication.

Anyway, Xbox 360 had a whole section of the floor devoted half to Halo: Reach and half to Kinect. The Reach side was decked out like a military barracks, with about ten demo systems running amongst the camouflage. The Kinect side was set up more like a family, with multiple HD displays set up running Kinect Adventures, with a second screen back-to-back with the first so viewers could watch as well. Kinect looked really good, though I couldn't judge the lag or accuracy that much since I didn't try it personally. One thing I have to say is that Kinect looks like it will actually follow through on the promise the Wii made of getting people up off the couch. While Wii gamers quickly discovered that you didn't actually have to act like you were bowling make a good shot – you just had to flick your wrist – Kinect actually makes you get up.

My first view of the Move was a little disappointing, not really showing its real potential. The Move was actually being shown off by a game studio, not Sony itself, also lessening the impact. The first demo of the Move that I saw was for a new Lord of the Rings game called Aragorn's Quest. In this kid oriented button mashing game the Move was basically just another button to hit, just shaking the controller in mid-air caused Aragorn to execute complicated twists and turns – with absolutely no correlation to the actions you were actually doing. The second Move demo I saw was much more impressive, with the system being used in a first person shooter (FPS). The precise aiming using the Move and navigation controllers was incredible, substantially better than Wii, and still supporting beautiful high definition graphics.

Both systems look like they will have some amazing games in the next few years, and with this console generation expected to last several more years, there is time for them to mature and each find their niche. So, until next issue, listen in lecture, do the assignments, and most importantly… Keep on Gaming.

Book of Awesome

Book Review

MADELAINE LIDDY
2A NANOTECHNOLOGY

The Book of Awesome by Neil Pasricha began as an internet blog named "1000 Awesome Things" found at *www.1000awesomethings.com*. The purpose of the blog was to bring attention to the little things in life that make our days better, in a world filled with turmoil. Each day, a new and awesome thing was released onto the blog complete with a comment from one of the visitors of the site and their personal story to go along with it. As popularity grew, the 1000 awesome things were compiled into a book called The Book of Awesome. It contains things in our life that make you stop and go 'huh…that is awesome'. The subtle things that would otherwise go unnoticed are brought to your attention in this comical novel. Now, the question to be answered when you read this book or blog is not whether or not you love high-fiving babies, hitting all green lights, sneaking McDonalds and hiding the evidence, licking the cake batter off egg beaters or listening to the sound of scissors cutting through construction paper; but the question is what kind of reader will you be? Would you sit down and read the near 400 page novel in one sitting, save it for rainy days, read it at breakfast to begin your day or after dinner to end it? Either way, whenever you pick up that novel and read something, just remember you're adding just a little bit of awesome to your day. Who doesn't love that?

Review Based on the Trailer

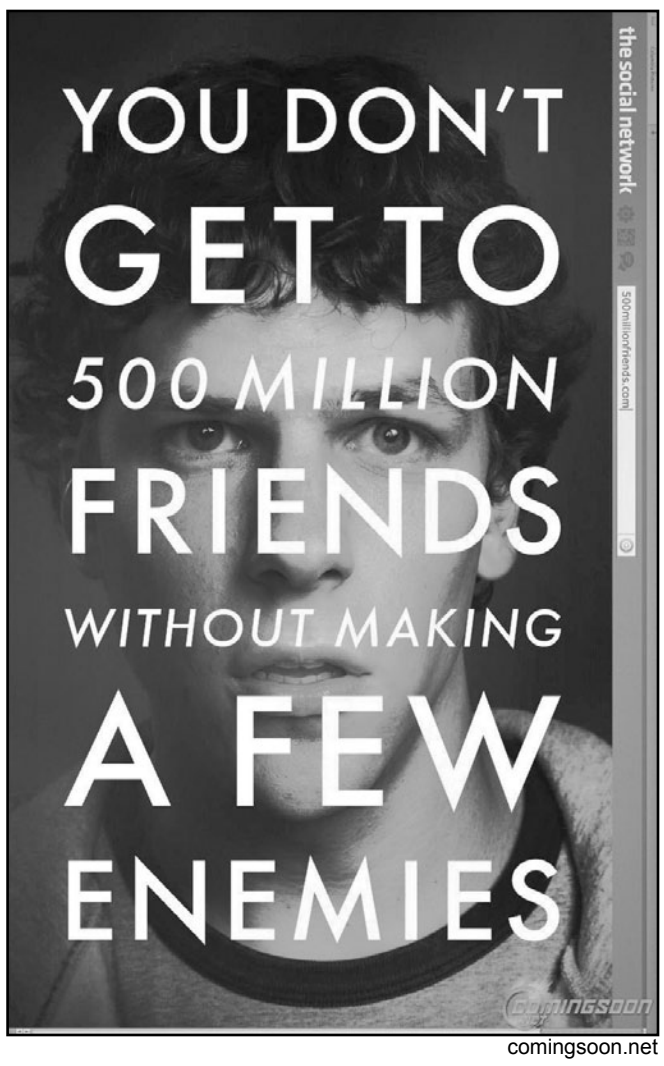
The Social Network

JON RADICE
4A CHEMICAL

Fall is a fun time, ain't it? Whatever source of entertainment you so crave, fall has it in spades. The rebirth of your favourite TV show, back again for another season. Football, hockey, and basketball start up, just as the World series comes around. My inner movie buff goes ape for the fall season as we get to push aside all the campy summer blockbusters and sink into some movies with a little bit more depth.

Lets see, which early release is getting the most Oscar buzz as of right now? Oh, I've found one. It's directed by David Fincher, which is always a plus – I really liked the style of Fight Club and the tension of Zodiac. It's written by Aaron Sorkin – that's another bonus because he wrote all of The West Wing, so he knows a thing or two about loading up the drama. As much flack as I might get from this, I can't recall a movie with Jesse Eisenberg (of Zombieland and Adventureland fame) that I outright hated. It seems that all of the planets in the movie-verse are aligning, and this movie might be just be a great, fun to watch drama about the creation of Facebook.

Then how come I feel so uneasy about a movie based on the topic of the creation of Facebook? It really comes down to the tragedy of watching any good biopic: you already know the ending before you sit down. Mark Zuckerberg becomes filthy rich, and unless they decide to butcher the truth that is present day, chances are that's going to happen. What makes it worse is that the Facebook saga is far from over. The mention of Facebook in its September 2010 incarnation means that any real-life further developments of Facebook are omitted. In one way it preserves the image that we all have of Facebook in its present-day height: the overlord of everything social, and the backbone of our day to day life. But in the other, the tale isn't over. In literary sense the fall from grace and the catharsis of Mark Zuckerberg is not yet televised, and we don't get the complete story arc as a result. Some movies can pull that off very well (I'm looking at you No Country for Old Men), but it is no easy task.



comingsoon.net

Right, yes, trailer. To put it succinctly, every television promo, similar to Inception's promos, suck mightily. It seems to be a growing trend for promoting any movie to ignore its target audience and market it to the Spike TV crowd. Funnily enough the Spike TV ad is one of the better ones, sticking closer to the vibe of the theatrical trailer rather than trying to make the plot more quirky than it needs to be. One thing that doesn't sit well is the tagline "You don't make 500 friends without making a few enemies" and I find it hard to believe that is the best tagline can be thought of. The trailer does set a great mood, though. My inner hipster swoons for the choir rendition of Creep by Radiohead and it captures the rapid-pace of the movie, especially near the end of the trailer where the speech is so rapid it's almost dizzying. Where there were many worries when first told of a movie about Facebook, the theatrical trailer pushed those aside. It shows a lot more tension, more emotion, and much more depth than I could have imagined. As a result, I'm definitely going to see this when it comes out on the first day.

Luckily the wait is not that long. *The Social Network* hits theatres October 1st. Like.

The Fifth Down

SI JIA ZHANG
4A NANOTECHNOLOGY

Hey football lovers, welcome to the first edition of "The Fifth Down." Every other week, I will cover topical issues in the NFL and provide fantasy advice for the competitive football-crazed-engineers out there. My column will be split into 3 sections:

1) 2 Minute Warning
2) Game Winning Field Goal
3) Post Game Press Conference

"2 Minute Warning" is a discussion/blog style section that covers a select event/controversy that occurred in the NFL during the past two weeks.

"Game Winning Field Goal" is where all the fun stuff happens! This section is all about fantasy football; if you want to win this season, you better read this. The final 3 points always win games, therefore the theme of this section is the number 3. This section features 3 free agent pick-ups (hopefully "free" in your league), 3 MUST-START players, and 3 MUST-BENCH players for the upcoming week. Guaranteed to get your mojo going. ;)

"Post Game Press Conference" will feature lockdown winners for 3 upcoming games.

With the introduction taken care of, let's play some football!

2 Minute Warning

Topic: Cowboys vs Vikings: Who sucks more?

"The first Super Bowl in which the home team (Dallas) is a participant" Are you kidding me? (à la Jim Mora) The Cowboys, or should I say the Cowgirls (nothing against the lovely ladies out there) have been embarrassing themselves on the Gridiron for most of September. The saddest part is nobody knows what exactly is wrong with this team. They're ranked 2nd in passing with 325.5 yards/game, 4th in total offense with 395 yards/game, 2nd in receiving yards and yet they still haven't managed to win a single game! With their bye week coming up (in week 4), Cupcake Philips better figure something out in a hurry before Jerry Jones embarks on another head hunting trip. Here's an idea: Start Felix Jones over Marion Barber and Dez Bryant over Roy Williams. Barber's slowing down (definitely not the 2008 version) and he isn't running in "Beast Mode" very often; time to try some speed with F.Jones. Their most recent game showed their versatility on offense. This is a team that has immense talent; the challenge is to use it. This ultimately falls on the coach. With a 1-2 record going into the bye week, it's time for Dallas to show up.

The Minnesota Vikings sure aren't "invading" any teams this season. With such high hopes going in, especially with Favre's Unretirement 2010, the Vikings have been nothing short of a disappointment (just like Lost's finale). They have been atrocious on both ends of the field. Ranked 19th in total offense, a nasty 24th in passing yards (185 yards/game) and even with Adrian Peterson, arguably the best rusher in the game, the Vikings can't crack the top 10 in rushing yards (11th in the league). Luckily, it's easy to pinpoint why they're "sucking": they have no dependable receivers. With Sidney Rice, their top receiver from last season, recovering from hip surgery and out until at least Week 6; Percy Harvin, their #2 receiver having a forgettable start to the 2010-2011 season and every other receiver on the squad playing like they were on the 2008 Detroit Lion's team, it's safe to say the Vikings have to sign a receiver, and fast. With news of their recent addition of WR Hank Baskett and their failed attempt in trading for WR Vincent Jackson, it's time to start doing the rain dance for some Fast Healing Miracles!

In conclusion, they both suck. As to who sucks just a bit more than the other, I'd say it's the Vikings. Although they beat Detroit in Week 3, Brett Favre's performance was sub par. They definitely need to fill the void at the WR position. Dallas reassured its fans by finally winning a game in Week 3 but the most important thing is consistency; history suggests it's going to be a tough road ahead. Maybe QB Tony Romo should try switching girlfriends again.... at least they had a winning record in the Jessica Simpson days.

Game Winning Field Goal:

(Since *The Iron Warrior* is a bi-weekly print, tips will be provided for the upcoming week only.)

Top 3 Additions:

1) Brandon Lloyd (WR, Denver) 29% owned in Yahoo! Leagues: In 3 games, he's averaging 113 yards/game. In Week 3, he caught 6 balls for 169 yards and a TD. Get him while he still lasts.

2) Dustin Keller (TE, NY Jets) 65% owned in Yahoo! Leagues: 2 TDs in the 1st quarter against the Dolphins in Week 3. Sanchez found his man-friend.

3) Peyton Hillis (RB, Cleveland) 44% owned in Yahoo! Leagues: With Jerome Harrison injured, Hillis is taking advantage of the spotlight. 144 yards rushing + 36 yards receiving + 1TD = Add.

Top 3 Starts:

1) Carolina RB DeAngelo Williams against New Orlean's Saints' 30st ranked run defense.

2) Philadelphia WRs DeSean Jackson/Jeremy Maclin against the Redskin's 31st ranked pass defense.

3) Green Bay WRs Greg Jennings/Donald Driver against the 28th ranked pass defense: Detroit Lions.

Top 3 Players to Bench:

1) Any Pittsburgh QB: The Steelers' got lucky with their backup QB in Week 3, but it won't work against Baltimore's 2nd ranked pass defence.

2) Baltimore RB Ray Rice: Difficult fantasy year for Ray Rice and it won't get any better against the Steelers' 5th ranked run defence in Week 4.

3) Any Detroit QB or WR : Unless Matthew Stafford comes back, the Lions' passing game will definitely not get any better against Green Bay's top ranked pass defence.

Post Game Press Conference:

The 3 Lockdown Picks:

Green Bay Packers over Detroit Lions: The Pack is Back.

St.Louis Rams over Seattle Seahawks: Sam Bradford is a sign of hope for the Rams.

NY Jets over Buffalo Bills: The Bills are aiming for next season already... The tanking begins for the #1 draft selection.

A Hopeful Analysis of the Toronto Maple Leafs

SPENSER GOOD
1A MECHANICAL

Watching another year go by without a Cup was especially difficult this year for Leafs fans. When Chicago won the Cup in June, they made the Leafs the sole owner of the longest Stanley Cup drought of any team in the National Hockey League. So, with the excitement of the hockey season starting to build, a Leafs fan inevitably asks him or herself, is this finally our year?

The answer to that question depends on your perspective. If you are asking "Are they going to win the Stanley Cup?", the answer is pretty simple. According to *sportsbook.com*: the odds of that are 75/1, the same as the lowly Edmonton Oilers. So the answer to that question would be no, probably not. But, a Leafs fan should be comfortable with lowering his or her expectations, and may poise a more realistic question; "Can they at least make the playoffs?" Well, the answer to that question is much more complex and many more variables have to be considered.

The first and most obvious problem that has to be addressed is offence. Last season the Leafs were tied for 25th in goals per game. But, can that change? The additions of Colby Armstrong and Clarke Macarthur will add some depth up front, but are far from dramatic. If the Leafs are going to add more firepower, it is only going to be through strong, if not outstanding seasons from rookies Christian Hanson, Tyler Bozak and major junior phenom Nazem Kadri. The success of the rookies, especially Kadri, could make or break the Leafs offence, and ultimately, their season.

Goaltending looks solid. A phenomenal season from Gustavsson could lift the Leafs up four or five places in the standings, but that may be too much to ask for. However, they'll still be solid in the crease with JS Gigeure as a reliable backup in case Gustavasson's health or performance declines. Defense will be better this season with the return of a healthy Mike Komisarek and the steady improvement of sophomore Carl Gunnarson. However, if the Leafs want to significantly improve from their miserable 3.21 goals against per game from the 2009-10 season; Dion Phaneuf, Francois Beauchemin and Luke Schenn must have good seasons.

Coach Ron Wilson must improve his special teams strategy. With the addition of two strong checking forwards in Armstrong and Macarthur, and a deep and talented blueline there is no reason why the Leafs should be ranked last in the penalty kill for a second consecutive year this season. The lack of powerplay success makes more sense when examining the Leafs roster, but with a good point man in Kaberle, a good blueline shot from Phaneuf, a sniper in Kessel and the addition of the feisty Kadri, the PP should and must improve this season.

The intangibles of this year's roster must also be examined. It has been a long time since the Leafs have had a strong voice in the locker room. Phaneuf must fill that vacancy as team captain. If he is successful it could do wonders to team confidence and attitude. However, if he fails it could mean another repeat of last season's on ice apathy and overall lack of character.

So, will they make the playoffs? Based on analysis, the answer is probably no. However, when you are a Leafs fan, you have to have an optimistic mindset rather than that of an engineer. If the Leafs rookies have good seasons, Wilson finds a way to make the special teams work and Phaneuf can be the strong captain they so desperately need, the Leafs will improve. If, on top of that, Gustavsson has an outstanding year and Beauchemin, Schenn and Phaneuf improve on last year's mediocre season, they will make the playoffs. As Leafs fans, all we can do is pray.

The Brew Man Group: Smash Bomb Atomic IPA

DAN ARMSTRONG
4A MECHANICAL
NEIL PARTRIDGE
4A CHEMICAL

This is Dan and Neil's fifth term writing as The Brew Man Group. As such, we are starting to run out of new styles of beer to cover. Given the time of year and the holidays that are fast approaching, we were hoping to report on an Oktoberfest beer or a pumpkin ale, but sadly the hand that feeds seems to have arthritis or some shit because the LCBO is being rather sluggish at bringing in the fall seasonal beers. In this predicament, we've decided to talk about a beer that's relatively new on the Ontario beer scene, a beer that (in certain geographical regions) would blend in with dozens of others, but in our colonial province, stands out like an abortionist at a Palin rally. The beer of which we speak is Flying Monkeys' Smash Bomb Atomic IPA, a West-coast style IPA that has yet to hit LCBO shelves, but has graced many a beer-bar in Toronto (C'est What, Bar Volo) and recently, our very own Kickoff. For those of you paying attention, you might bitch us out for having already written on the subject of the India Pale Ale, and that the Brew Man Group is running out of ideas. First of all, shut up. Second, this one's an American style IPA, not a British one. Third, since there are new students on campus who may or may not be familiar with our column, it is somewhat necessary to remind everyone that Keith's is NOT an IPA, so pour that crap down the sink and read on.

Dan: Legend says the IPA was crafted by the Brits in the late 18th century as a stronger, well-hopped pale ale to be shipped to the troops in India, with both alcohol and hops acting as natural preservatives for the long trip. While it is generally accepted that George Hodgson's India Ale was the first of its kind to exploit the Indian market in the 1790s, with several other breweries trying to latch on to its success, it is unclear whether the beer was actually designed for this purpose or if the troops in India just didn't want to drink porters in the hot weather.

Regardless, today's American IPA (AIPA), particularly the West coast interpretation, consists of an ale of similar strength to its ancestors (approximately 6.5% ABV), but is generally lighter in colour and uses (staggering amounts of) American hops such as Cascade and Amarillo that focus on citric, spice, and floral flavours, contrasting the earthy, woody, sometimes herbal flavours of British hops. Also essential is the practice of dry-hopping, which refers to adding hops to the beer as it is fermenting, providing a more intense hop aroma and flavour without much effect on the bitterness.

Neil: Dedicated Brew Man Group readers are no strangers to Ontario Craft Breweries. But for our newest, most sensitive minds (aka Frosh), the Flying Monkeys Craft Brewery is a citadel unto beer, stationed in the holy land of Oz (actually, the lakefront of local Barrie). Recently, I was given the chance to volunteer at the brewery for a week, learning the fine art of making, and drinking beers routinely. No word of a lie, my end of day assignment (after brewing beer) was to taste test rival brews from around Ontario and compare them to the likes of Hoptical, Netherworld and Smash Bomb. Life was good... Anyways, Flying Monkeys is co-owned and led by brew master (and in his own words "Chief Executive shit-stirrer") Peter Chiodo, a real lover of unique beers. Since the brewery's inception (post-Robert Simpson Brewing Co. for you history buffs), Peter has introduced dry-hopping into most of his beer lineup using a curious device called the hoppopotamus; including the very, VERY hoppy Smash Bomb Atomic IPA.

Dan's thoughts: From the first whiff of the billowy, persistent head, I knew I was going to like this beer. For those who are familiar, the aroma can be reminiscent of Hoptical Illusion, but is much more intense and complex. Where Hoptical is heavy on Amarillo hops, Smash Bomb focuses on a new American hybrid called Citra hops, consisting of 50% Hallertauer, 25% Tettnanger, and a 25% potpourri of other varieties. And when I say 'focuses on', I mean there's a f**kload of them. Massive amounts of grapefruit, pine, and tropical fruit dominate the flavour, leaving little room for the malt profile to come through, though I can pick up a mild sweet caramel flavour. The finish is puckering-ly bitter and quite dry, giving you little choice but to keep on gulping. Unlike Neil, hops are not my aphrodisiac, (or cocaine, or Viagra) but I do occasionally need a fix. To be honest, Smash Bomb is more of a hop overhaul than a fix, and I'm not sure I'd want more than a couple in an evening, but it is damn satisfying and something that our province's underdeveloped beer scene desperately needs. **[4/5]**

Neil's thoughts: Having sampled both the first pilot batch, and the second more refined follow-up, I am pleased to be a self-proclaimed "Smashed Bomber Man"! Kidding, about that play on the once popular but now lame game series... The second available (and most likely to stay) batch pours as a russet crystal-clear beer, definitely on the dark side for an AIPA. None the less, I appreciate the switch from the initial straw tone of the first batch, as now there's some darker crystal malts to back up the mouth feel, and offset the hop assault. And hot damn, is it ever hoppy! Quite literally, this reminds me of the sensation of popping a compressed hop pellet onto the tongue, and waiting (don't ask why, I'm a home brewer). However after a few more sips, you can start to pick out the delicate floral and fruity cacophony of flavours associated with fresh dry-hopped beer. Overall, I look forward to finally being able to show a "real IPA" to parents and the cursed consumers of Keith's, but I feel they (and most) would find this beer too awesome to handle. Of course, there are always some minor improvements to be made in any beer, but a great start! **[4/5]**

A big shout out to Peter, Yoey, Paul, Papa Smurf and the rest for a great experience.

Recommended for consumption if you enjoy: Flying Monkeys' Hoptical Illusion, Dogfish Head 60 Minute IPA, Scotch Irish Sgt. Major's IPA

Props to hops // Dan and Neil

The Life and Times of DJ MadHatter

DJ MADHATTER
2DJ MADHATTERING

I am the MadHatter. I have been wandering around the area taking note of the wonderful things that bestow themselves upon me. From the green trees to the pineapple helmet, the cold hallways to the fish coloured laundromats, the purple smelling staples and sweaty sausage fixings. I have seen all, said all, heard all. My stories are nothing if I can't share them with my peeps.

Sooo..... I was walking through UW during Frosh Week and heard a cheerful sound. Hundreds and hundreds of first years running all around. They all looked so happy and sweet, thinking that university will be an easy feat. And to their dismay, EDCOM would not let them live another day. Amazing Canadians, and people from all over, came to roll in the clover. As the days had progressed, the leaders and frosh were dressed. With hardhats from here to Isengard, the frosh were told to fight long and hard. To finish time here under 7 years, with happiness, friendship and lots of BEER. They now know that engineering is their fate, with classes up the ying-yang that they will hate. On that note I'll start the chant, "HERE'S TO THE ENGINEERS!!", they rant. With an engineering spirit and a glass in their hands, we respect THE TOOL and all its commands. Its inspiration and wisdom shall hold true and strong, even if for you engineering seems wrong. As you venture out into this new world, your lives with each other will become swirled (yeah I know it's a stretch). Just remember one day when you look to the sky, you will hold that ringed finger up there so high. With all the memories and friends you all have made, 'cause now you're receiving CASH MONEY!! GETTIN PAID! So if you're in bed and hear such a clatter, don't worry or wake it's just me, your friend, the Mad Hatter!

You will know me as the Lord, AS I LAY MY VENGEANCE UPON YOU! Englewood-Jack!

To all ma peeps, PCE out for now!!

TTYL

DJ Madhatter

Any questions you would like answered drop me a line at *DJMadhatter1@gmail.com*. Satisfaction comes with experience.... ask Chad! For all other enquiries please dial 1 and an operator with be with you shortly.

Could Your Kegger be Good for the Environment?

CHAD SEXINGTON
4R MANGINEERING

Good Morning Sexy Readers!

Let nobody say that Chad is not a planet friendly lumberjack. In fact, all lumberjacks are fans of sustainability, for if we weren't, what would we axe down? Yes, sexy readership, it's helpful to love the environment to be a good lumberjack, and one of the ways to make sure that you are, is to watch your giant booted carbon footprint.

It's a brand new term for all of you people, and that means new faces around campus. One fun way to get to know some of these new faces is to invite them to a sexy party. But which is better? To party at a house, or at a bar? Everyone (except the law) knows that kegs shared between friends are the most economically friendly solution to a tight student budget, but what about the environment? 'Can a carbon footprint be calculated for a party?' you ask. Chad Sexington is going to try! First, a few rules: We're going to assume that these values are correct (I've cited sources), and that only the immediate costs of the beer production and transport/storage are involved. We will also consider the transport to the bars and the parties to cancel out as public transit in Waterloo is fairly good.

A typical breakdown of CO_2e is as such: Ingredients: 36%, Electricity: 26%, Equipment: 13%, Travel and Commuting: 10%, Freight: 7%, Fermentation: 5%, Packaging: 3%. [1]

First, it's necessary to know the carbon output involved in acquiring a keg of beer. That one's easy. For example, the average unit energy per keg of beer produced by small microbreweries is ~46kWh [2]. Combining this with the average carbon released per kWh of energy (460g), we find that one keg of beer releases around 21.6kg of carbon dioxide during production from energy. This is upped by your ice use (~Combine this with the short drive required to pick up the kegs from the local brewery (~10km is about 2.5kg), the ingredient production and storage [3] and assuming that your midsize mid-range fuel economy van can hold 8 kegs, we see that the beer and supplies for your 8 keg party will run up to just under 500g CO_2e per 20oz cup [1]. So, if you want to reduce your carbon footprint, drink your beer warm, or cool it with natural means (winter parties anyone?!). This cost is increased when the beer is brewed elsewhere and by big companies.

Compared with going out to a bar, many of the places that Engineers know and love provide music, dancing, air conditioning, glass mugs, fancy taps and pitchers, servers who drive to and from work, etc. etc. etc have high emissions. These aside, just the beer alone (and its storage costs, nearly 50% of the emissions) can run up to 900g CO_2e per 12oz bottle of beer (if the recycling is included) or up to 590g CO2e per 12oz can [4]. However, these numbers could be a lie as well, as the Fat Tire Amber Ale company did a 100% lifecycle analysis of their beers sold in a local pub and discovered upwards of 2kg of emissions per 12oz bottle (factoring growing crops and corporate expenses) went into their product. Quite a number! [5].

Any way you slice it, beer can be a costly endeavour, but the opportunities for process optimization and emissions reductions in this booming industry are everywhere. In the world of Chad, at least environmentally, the kegs are way better than the bars and bottles. So next time you have a hankerin' for a tankerin', consider the best way to reduce your emissions and love the environment, which loves you so hard, right back again. Party on.

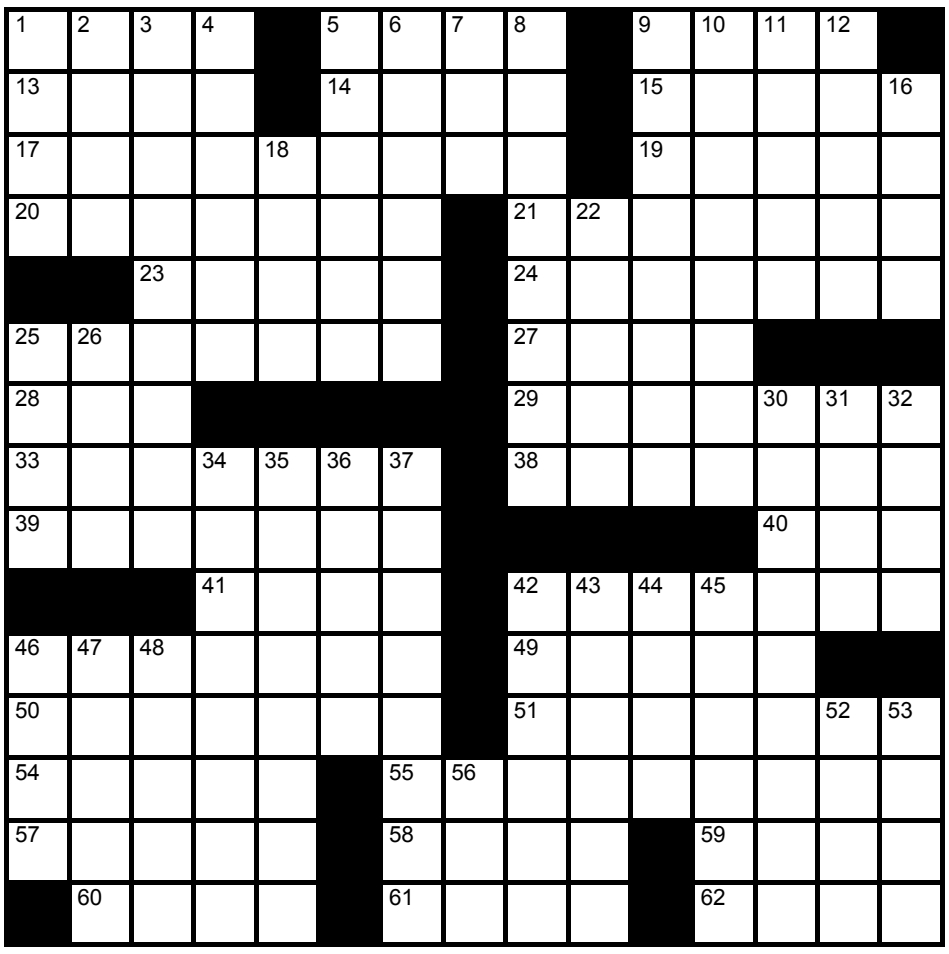
Until Next time

Stay Sexy.

[1] *www.guardian.co.uk*
[2] *Bristlingbadger Beer Blog*
[3] *www.greenprogress.com*
[4] *www.grist.org*
[5] *www.newbelgium.com*

The Iron Crossword

ANGELO ALAIMO
3N ELECTRICAL



Across

1. After-dinner selection
5. Hack
9. Short Erect Tail
13. British
14. Ctrl-Y
15. hauled
17. Waterside Terrier
19. Kind of group, in chemistry
20. Correct kindly
21. Pack of different beers at the LCBO
23. Cape made from thick water resisant wool
24. Pagen objection to christianity
25. Marine rock-clinger
27. Get-out-of-jail money
28. Swindle
29. powerline worker
33. European deer
38. Design in metal
39. Philisophical attributes of an object
40. First year's home
41. Think (over)
42. Slang for large breasts
46. Warrior Sword
49. Geum canadense
50. Red Bordeaux win (pl)
51. Human eye sensors
54. Moorehead of "Bewitched"
55. feeling of the heart
57. Operatic villains, often
58. Masculine form for countess
59. "___ quam videri" (North Carolina's motto)
60. "___ go!"
61. Squirrel Nest
62. "Cut it out!"

Down

1. Type of ski-lift
2. Great lake
3. DHC-2, DHC-3, DHC-8, etc.
4. Unsaturated alcohol
5. Saskatchewan country music jamboree
6. Daughter of Tityrus in greek mythology
7. ABABCDECDE rhyme scheme
8. Anything is _____!
9. Quick metalwork by press
10. Used to make your code work
11. An obsolete word for useful
12. Article of faith
16. Small shallow draft boat
18. Famous extinct animal
22. At full speed
25. 4 046.86 square meters
26. Cheers of dislike
30. Hoax (2 words)
31. Affirm
32. Loch ____
34. Person of reserve and modesty.
35. Inability to control urination condition
36. Great brilliance, as of performance or achievement.
37. Took in the glory
42. Zimbabwe's capital
43. Too much
44. I ___ed this much after deductions.
45. Common cutting tools
46. Skin repair
47. bloom of algae
48. House of a minister.
52. "Not to mention ..."
53. Increase, with "up"
56. On sides of human heads.

The Iron Sudoku

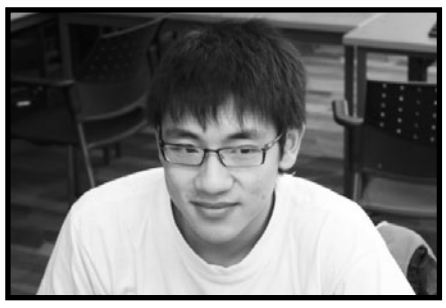
MADELINE LIDDY
2A NANOTECHNOLOGY

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

THE IRON INQUISITION
Krishna Iyer, 2A Nanotechnology

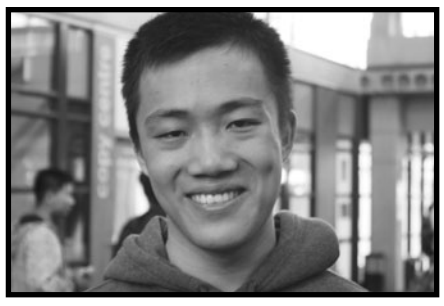
"What does it mean?"

"42."
Brienne O'Grady, 2A Environmental
Lauren Harrison, ex-2A Environmental



"Nothing."
Carson Yau, 3N Computer

"I don't think it means anything."
David Guo, 1A Software



"A figment of your imagination."
Sam Kim, 1A Environmental

"That's where we can find a pot of gold... A double pot of gold!"
Adam Dobri, 4A Nanotechnology

"What do 'N' and 'T' mean?"
Yasser Al-Khader, 1T Mechatronics