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UW BAJA SAE Unveil Their New Ride

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Proposed New Engineering Society Executive Structure Released

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A Final Props to Hops from The Brew Man Group

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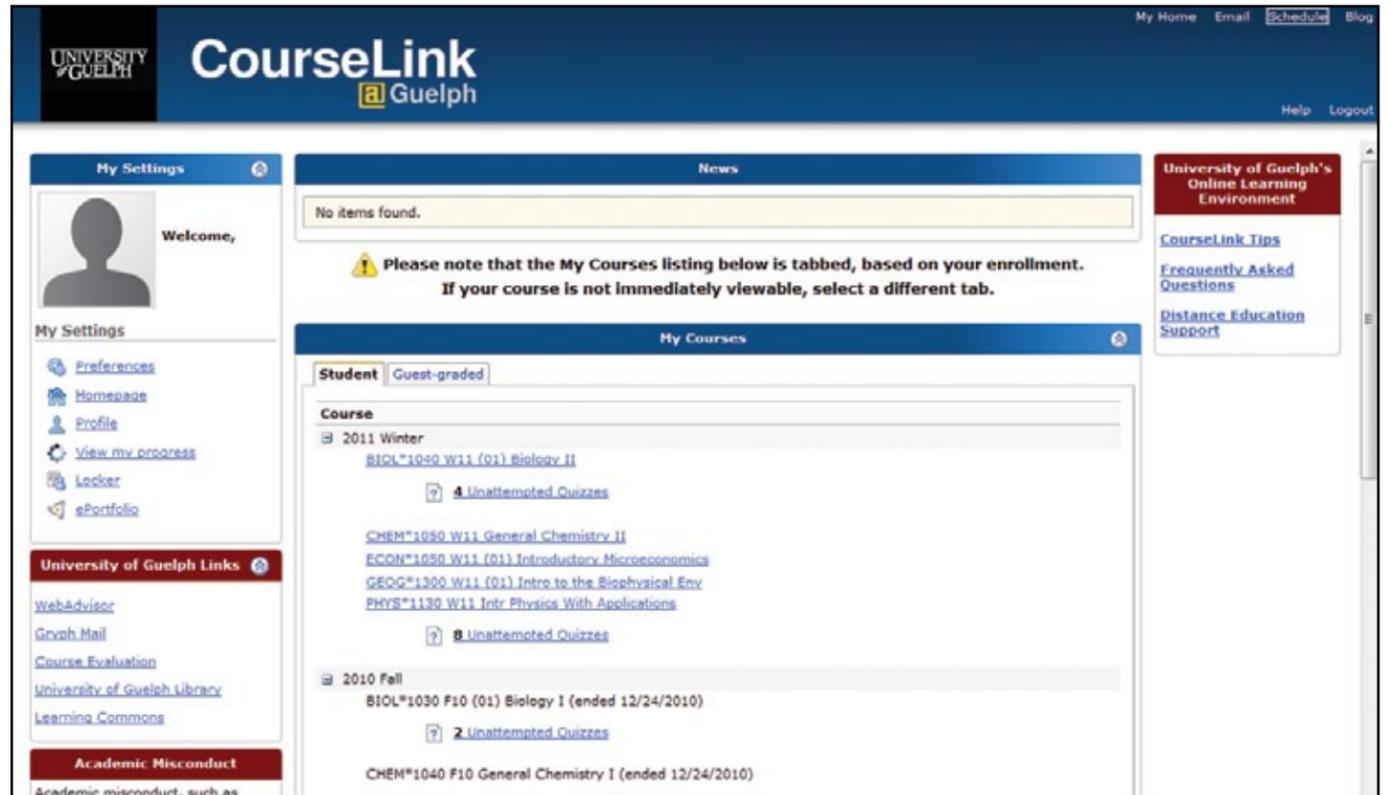
'Desire2Learn' set to Replace UW-ACE in Winter 2012

AMRITA YASIN
4B CHEMICAL

Whispers and speculations of UW-ACE's replacement were finally hushed on March 17, 2011, as Desire2Learn (D2L) was announced to replace UW-ACE as the learning management system (LMS) at the University of Waterloo.

In May 2009, Angel Learning Inc., the software supplier of UW-ACE was purchased by a competitor LMS provider; Blackboard Inc. Shortly after Angel's purchase, Blackboard announced development and support on UW-ACE would cease. The default option for UW was to switch over to Blackboard's LMS, which would have required current UW-ACE users to get used to a new LMS. Since these groups would have to get used to a new LMS, an opportunity was taken to explore the bigger set of learning management systems offered by other vendors. An LMS Selection Committee comprising of faculty, students, IST, the Centre for Extended Learning, the Centre for Teaching Excellence, the Office for Persons with Disabilities, and The Library was created to determine the needs and requirements of users and to find appropriate software.

To gather student input on a new LMS, an online survey was conducted to which approximately 7,300 students of the pop-



A screenshot of the University of Guelph's Desire2Learn LMS system which is to replace UW-ACE

ulation of 28,000 responded. According to Jan Willwerth, lead on UW-ACE help/training/communications in the IST department, the foremost need of the students was consistency of course content delivery among a student's many

courses. For example, while instructors are advised to use the 'Resources' tab on UW-ACE for placing course content, many instructors use the 'Lessons' tab for assignments, lecture notes, quizzes, dropboxes, and many other materials

leading to a confusing interface. From this, students also asked for an easier to use interface with elements of the system clearly laid out.

See D2L on Page 3

Engineering in Japan Saves Lives Amid Disaster

JACOB TERRY
1B NANOTECHNOLOGY

If you were to take a look at the Earth's tectonic plates, Japan is in an extremely unfortunate spot, sitting on the border of the North American, Eurasian, Pacific and Filipino plates. It comes as no surprise that the region has been covered by numerous disasters over its history; the most recent addition being the earthquake and tsunami off the Japanese east coast mid-March.

The earthquake hit 130 kilometres east of Tōhoku on March 11 with a magnitude of 9.0, the fourth-largest earthquake in the world since record-keeping began around 1900. A tsunami followed the earthquake and reached over 7 metres high in northeastern Japan, destroying city blocks and farms in the areas near Tōhoku and Sendai. The tsunami was followed by more than 50 aftershocks over the day, many of a high magnitude. Trains that would normally be punctual ground to a halt and many commuters suffered service outages as networks went down across Tokyo. The death toll had risen to just under 7000 in the week after the initial earthquake, but over 10,000 people were still unaccounted for. While the earthquake had devastating

effects, especially in northeastern Japan, the deaths due to the tsunami and earthquake were minimized in what some would claim a success in safety and engineering. Compare this year's earthquake to the 1923 Great Kantō earthquake, which caused 100,000 deaths with a magnitude of 7.9; the deadliest recorded earthquake to hit Japan. The 1995 Great Hanshin earthquake, with over 6000 deaths from a magnitude of 6.8, was not as deadly as this year's earthquake but not nearly as powerful.

The advancements in safety procedures and engineering have dramatically decreased risk of death or injury in disasters. Engineers around the world see tsunami-resistant buildings as a goal to reach, as earthquake resistance is something most engineers have managed to accomplish, especially in Japan. Japan's strict building codes are higher than in most countries and, for the most part, buildings managed to hold up against the disaster. The country's tsunami warning system has been regarded as the most successful in the world, with advisories sent well in advance and giving citizens an acceptable amount of time to evacuate to higher ground or shelters.

See JAPAN on Page 5

New Housing Bylaw Changes Imminent

ADAM KLETT & TREVOR JENKINS
3A MECHANICAL & MANAGEMENT

New housing bylaw changes are imminent in Waterloo. On March 10, an information session, arranged by FedS VP Education Nick Soave, was held on campus to give an opportunity for the city to tell students about the proposed housing bylaw changes and how it may affect students. In attendance from the city was Jim Barry from Bylaw Services, Tanya Curie from the planning department and Ward 6 Councillor, Jeff Henry. An update from staff is set to be delivered to council on April 11, 2011, at which point it will be decided where the bylaws go from there. Most students are in the midst of exams then but concerns and comments can be channeled through the FedS VP Education Nick Soave or Ward 6 Councillor Jeff Henry.

A number of significant changes are being proposed in, what is basically, a complete overhaul of the rental licencing structure in Waterloo. A 3-bedroom limit on all low-rise rental properties, a police check on landlords to obtain a license, a requirement to include rooms such as a living room and dining room in all units, minimum room sizes and maximum gross floor area coverage for specific rooms are all significant changes

that will impact rental housing in the region.

This law would apply to all low rise housing rental units, which encompasses all single and semi-detached houses, triplex units and town houses. Exemption would be made for special use units like group homes. That being said, many rental properties already operate illegally and the new law will probably not change this. For a lodging house to be legal, it must have their license clearly displayed in the unit. The major exception to this law is high-rise apartment style housing which the city states are built to higher standards, so don't expect any 3-bedroom limits or mandated minimum bedroom/living room size in this type of housing.

One of the major changes will be a 3-bedroom limit placed upon Class A, B and E licenses. Class C and D are exempted and will be discussed in the next section. The city will enforce this limit through by-law enforcement inspections and via the floor plan drawings provided by landlords. Most of the units around campus contain 5 to 6 units, however the city states that there will be an adequate supply for renters in Waterloo as they are approving many new high-rise units, with over 2000 new units already having the green-light for construction and many more in developmental stages.

See HOUSING on Page 7

Letter From the Editor

Thank you! A whirlwind term I could not have done alone...



CAILIN HILLIER
EDITOR-IN-CHIEF

Wow, issue 5 is here at last, and if there has ever been a term that has flown by, it's been this one. I feel as though I have blinked and the entire term has passed by in a giant swoop. I have really enjoyed being EIC for *The Iron Warrior* and was happy to be able to accomplish the goals I set out for myself this term. I just want to give you an overview of the term to showcase our amazing team we have working so hard to bring you the paper every two weeks.

Well apart from this last editorial, which I am writing in a very sleep-deprived state on Sunday night, I have been able to write all of my editorials in advance and tried to put a great deal of thought into them. For those of you who actually took the time to read them, thank you for taking the time to do so. I hope I didn't waste your time.

I have also introduced a few additional columns into the paper this term. The "Letter from an Alumnus" column has started off well. Thank you to Amanda Hoff for your idea sharing and for writing the inaugural letter. I would also like to thank Sean O'Neill, EngSoc's Alumni Officer, for helping me to contact alumni for the purposes of writing articles for us.

Engineers Without Borders have also been fantastic contributors to *The Iron Warrior* this term. I would like to thank all of the EWB Correspondents for their wonderful and insightful articles. Thank you also goes out to Connor Allaby, EWB VP Communications, for coordinating all of their submissions.

Next, I had the pleasure of working with Chris Vandeveld, EngSoc's Historian Director, to obtain WEEF funding. Our WEEF proposal requested \$2500 to have our old archives professionally scanned and placed online. The older issues of the paper going back 30 years are very delicate and in need of some tender, loving care. After the funding council meeting, we received \$625, 25% of our total funding request. I will be presenting this same proposal at the Spring 2011 WEEF meeting and hopefully start the archiving process sometime in August. Stay tuned for old issues of *The Iron Warrior* to make their way to the website relatively soon! Thank you to Chris for all of your assistance in making this possible, go team!

Now for some big big big time thanking to the wonderful staff who have been working on *The Iron Warrior* this term. This has really become an IW family this term. I had a goal back in January to expand our staff and make the paper as inclusive as possible. I wasn't really sure how to go about this, but talking incessantly about the paper for the past four months seems to have done the trick. There are always people in the office, stopping by to offer a hand in whatever way they can, and several new faces have joined our team who have been fantastic contributors. I loved having you around this term!

Then there were the production weekends. For anyone who hasn't seen one of our production weekends, let me paint a mental image for you. Imagine coffee, and more coffee, all around. And laptops. And yelling, crying, laughing, hysterical laughing, singing, power napping and snacking. There is definitely an emotional roller-

coaster ride that goes along with these weekends and I wouldn't change them at all. "Where is your face?"

Before going any further, I must thank the graduating contributors to *The Iron Warrior*. There are so many people graduating this term who have added such amazing variety to our paper and worked with the paper for as long as I can remember. Your amazing writing, which has been passionate, insightful, and hilarious, will be missed. Previous contributors who are now graduating include Lisa Tong and Jay Shah. Shout outs to two amazing EICs from terms past, Amrita Yasin and Michelle Croal. You have both been very welcoming and inspirational to me over my time working on the paper. Our recent addition to the paper, Bobby Leung, has done a great deal in the short amount of time that he has been writing for us. Thank you for taking on little tasks this term and offering such great ideas at our meetings. Spencer McEwan, you have been a frequent contributor to the paper over the years, writing on a variety of topics this term alone. Jon Radice of Review Based on the Trailer, is also graduating this term. Your articles never cease to make me laugh, thank you for sharing your awesome movie insight in such a fun way! Our much loved Brew Man Group is also graduating this term. Dan Armstrong and Neil Partridge, thank you both for your witty and well-written articles that have shown me all that beer has to offer. Props to hops forever! Another fantastic columnist has single-handedly gotten many into running, the safe and healthy way, rain or shine. Kirsten Hoedlmoser always manages to inspire me and I am very sad to see her graduate. Thank you so much for sharing your amazing drive and zest for fitness and wellness, it really is contagious. Finally, I would like to thank Sean O'Neill for his Chad Sexington articles. You have written for *The Iron Warrior* for as long as I remember. I have no doubt that you will always stay sexy.

I would also like to thank Mary Bland for all of the advice she has offered me this term regarding *The Iron Warrior* and just about everything else in my life. I cannot tell you how much it means to have your help answering all of the questions I have and that you are always there to share your wisdom and listen. I am really looking forward to working with you for the next year with 2012 GradComm plans.

Many IW staff members have gone particularly above and beyond this term. Firstly, to the wonderful copy editors – Sydney Bateman, Alex Hogeveen Rutter, and Adriana Cameron – you have done a brilliant job editing, always in a very timely fashion. Thank you for your precision and flexibility. I would also like to thank Jacob Terry and Adriana Cameron for their distribution expertise! I really appreciate all of the help you provided getting the paper out all over campus and beyond!

Thank you so the wonderful staff writers who take on so many articles every issue.

Adriana Cameron and Trevor Jenkins, you are like a swarm of writing furry. And it's awesome! Thank you for covering all of the serious topics that you did this term.

Now, Angelo Alaimo, you get your own paragraph for sure. I cannot thank you enough for your help. Beyond help. You have been way more than an assistant editor this term. You do layout, copy editing, photo editing, answer all of the technology related questions I have, help me make basically every decision and have been the best teacher of how to be an EIC that I could ask for. And it's your 3B term too! You are a rock star and a great friend, thank you!

This brings me to *The Iron Warrior* staff awards for the term. This term we had two outstanding contributors worthy of the Editor's Award. First is Erin Matheson – you write like a fiend, you are as sassy as they come, and I don't know how you find the time in the day to do all that you do. How did you get so fantastic girl? Thank you for your wonderful contributions that never cease to make me laugh out loud over and over. Your advice on layout and content suggestions has been brilliant all term long and I cannot thank you enough for your dedication.

The next Editor's Award goes to Jacob Terry. Dear Jacob, you are only in 1B and have already taken on a huge role in with *The Iron Warrior*. You distribute papers like a mad man, have been an IW Twitter champion, and think of the most amazing article topics. You are always here to help and it has been a pleasure working with you this term. I cannot thank you enough for having offered such a refreshing and positive perspective for IW and myself this term. Stay awesome!

The next award is that of the Iron Pen. This recipient wrote almost 15,000 words for the paper this term and has been an outstanding contributor to the paper for years now. Coincidentally, he is also going to be the next Editor-in-Chief of *The Iron Warrior*. Jon Martin, you are amazing. Thank you for your dedication, editing, distributing and writing at a moment's notice. You were around for every production weekend and have learned a great deal to be EIC already – especially a huge thank you for this last production weekend for stepping in on Saturday for me. Best of luck as EIC in Fall 2011. I will be here to help you in any way I can.

I would also like to wish Mikayla Micomonaco good luck next term, Spring 2011, when A-Soc comes back on term. Let me know if you need any help, I am also a call away.

Lastly, I must mention the amazing people in my life who have made everything I do possible. Your support has really saved me this term. My wonderful family – thank you for your support, for reading *The Iron Warrior*, for always encouraging me and understanding why I am always so busy. Can't wait to live at home this summer! I also have the best friends in the world. Mike Soares, Kev Ling, Adam Klett, Sydney Bateman, Graham Stonebridge, Natalia Skomorowski, Trevor Jenkins, Mike Seliske, Hannah Lindsey, Scott Rankin, Kirsten Hoedlmoser, Jon Warren, Marc Tan, Drew Lemke, Kristen Roberts, Scott Hooker, Hob Lee, Chris Szybalski, Megan Pollock and Noel McGregor. I love you guys, thank you for always being there for me, to listen and to help and, most importantly, to have fun. You are boppin'! <3



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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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'Desire2Learn' set to Replace UW-ACE in Winter 2012

D2L from Page 1

Another important student-identified need is mobility – with the increase in smartphones, there is a strong desire of the student population to be able to visit the online component of their courses on mobile devices.

In spite of the general hatred towards UW-ACE, Willwerth commented that responses to the survey questions - particularly the open ended questions, were not too critical and did not provide any compelling reasons to look for a replacement.

Still, the committee requested RFPs from LMS vendors and explored possible open source solutions. Test sandboxes (software tests in a controlled environment) were created to gain first-hand experience on how each LMS could be used. After all the above steps coupled with further consultation of other universities, Desire2Learn was recommended by the committee.

D2L makes it easier to achieve con-

sistency as it has separate consistent tabs for quizzes, dropboxes and other learning elements which should make it easier for instructors to offer content and easier navigation for students. It also supports mobile-device applications which UW-ACE cannot.

Parallel to the mobility of D2L, another significant issue is for the software to be supported on multiple browsers. Current sandbox testing has only been executed on IE and Firefox and at this time nothing has been confirmed for other available web browsers. From an instructional point of view D2L makes the creation of teams within a class much easier. It also incorporates desirable elements such as file sharing, reminders, personal blogs, ePortfolio system, and project investigating ePortfolios. Willwerth remarked very confidently that D2L has no disadvantages over UW-Ace.

In terms of the switch over to a new learning management system, Jan Will-

werth commented that this is an opportunity to revisit online delivery of courses and to provide adequate training to students and instructors to fully reap the benefits of having an online learning system. The implementation of UW-Ace in 2004 was a rather hasty process and a novel experience for the instructors; the two main factors contributing to inconsistencies and insufficient knowledge of the UW-ACE system. Now, seven years later, the instructors and students have experience with online course delivery and are familiar with its unique features such as electronic submissions, online gradebooks, and course content delivery, which will make it easier for stakeholders to get used to the new system and explore its features. Wilfrid Laurier University and the University of Guelph are two other universities which also use the D2L LMS. With a noticeable proportion of UW faculty cross-appointed with the two universities, the move to D2L will not over burden the faculty with

more available time to focus on quality of education.

Desire2Learn was established by a UW Engineering student and has its head office in downtown Kitchener. The company is very open to feedback and working together - a huge positive for UW as the critical issue is not merely producing software but maintaining and continuously developing it.

The use of Desire2Learn will be scaled over the next three months for smoother switch over and troubleshooting; the system is expected to be fully implemented by Winter 2012. The details of the scaling are yet to be determined. In order to provide training to the users videos, documentation, one-on-one and group sessions will be offered. An open house is also in the plan with the LMS Selection committee and Desire2Learn representatives in attendance to address any questions.

Knowledge Integration Exhibition Huge Success

SHARATH SUNDAR
3A MECHANICAL

It is an exciting time to be living: as technology, innovation and culture boom, we students can literally achieve our dreams. I am talking about one such opportunity of creating a museum exhibition that could parallel a seasoned curator with several years of experience. If you do not know what I am talking about, you have not only missed out on one of the best opportunities to witness such a development but also lost out on all the adventure it entailed. Here, let me quell the suspense at which point you will be gnashing your teeth for missing this occasion. Over the course of the past week, the 3rd year students at University of Waterloo's Knowledge Integration program set up a full scale museum exhibit under the mast of the famed East Campus Hall facilities. The KI-X Museum project, unleashed after over a year of incubation, was such an exciting opportunity that only a select few around the world got to experi-

ence and I, for one, am very pleased to be right in the center of it.

Knowledge Integration (KI) is a new program-the first batch of students only graduate next year. It was started by Ed Jernigan, a systems design engineering professor. As part of the curriculum, the students in KI immersed themselves with the Amsterdam museum culture. Amsterdam has one of the highest exhibitions per capita in the world: Yes, it really does, despite being famed for other things. The museum exhibition is an 8 month project where for the first term we as a group come up with a theme, run a mock study, build posters and finally present a

storyboard/overall visual design of our exhibit. For the next 4 months (my current term), we take our designs from the previous term, refine our ideas, run a larger study to test our assumptions, and from our results we alter our decisions. We finally then go build our exhibition and bring her to life. The exhibition ran from March 14 to 16th.



Professor Larry Smith and Sharath Sundar at the KI Exhibition

Touring the exhibits, you would have learnt why robots may make you feel uncomfortable. Explore forms of peaceful protest and how you might get involved. Learned how limitations in mathematical tools led to the development of new ones. Understand the impact of a con-

cussion, and learn about other neurological phenomena like dreams, or why some people see letters and numbers in colour. Finally, discover how archaeologists determine the purpose of an unknown object, and have a chance to try it out yourself. My exhibition, entitled 'Guess What: Discovering objects through archaeology', is a small scale version aimed to teach the skills required to figure out mystery objects through the use of touch. In the larger scheme of things, we wanted people to think about how their everyday objects would shed light several thousand years from now on us, our culture and our civilization.

The exhibition has been a tremendous success, with over 700 visitors experiencing the exhibition. Furthermore, several visitors expressed their awe of how students at this age were able to present such well thought out, curiosity-provoking designs and their implementation. For more information about the museum exhibition you can visit kix.uwaterloo.ca

Letter to the Editor

Re: New OLT Sessions

MARC TAN
3T CIVIL ENGINEERING

Dear University of Waterloo Students,

This letter is to address the Student Life Office's (SLO, the office that organizes Orientation Week) decision to make Orientation Leader Training (OLT) mandatory for all returning leaders. As a note, this is my own opinion and not the opinion of the Engineering Society 'A' or any other group I may be associated with.

In the past, only new leaders were required to take OLT, a set of four courses that spanned roughly eight hours combined. After completing this, the leaders were allowed to do Orientation Week each subsequent year with no further training, as long as their applications were accepted by the Orientation Week organizers. Though the training sessions were not overly effective, the last several Orientation Weeks ran well with this process. The responsibility was on FOC (Federation Orientation Committee, student organizers of Orientation Week who report to, and were selected by, SLO) to ensure that only qualified individuals would be allowed to be leaders during

Orientation Week. As well, many faculties have leader retreats that go through Orientation Week policies, some leadership training, and important relevant information.

Recently, SLO changed their policy on Orientation Leader training to state that all new and returning leaders would have to complete a new revamped version of OLT. This was done after many leadership positions had already been decided, in the middle of the school term, and was a surprise for most leaders. This decision by the SLO shows little respect for all our experienced student volunteers, from the leaders on the ground, to the FOC who already put countless hours into the week. It directly demonstrates that they do not trust the decision made by their FOC in the choices of leaders, who have run a safe and smooth Orientation Week in the past. Even FOC, who were chosen by SLO, and participate in countless hours of their own training, are required to take these new sessions, implying that SLO are choosing "unqualified" leaders to organize the week.

The Student Life Office may say that the new program brings new material and insight into being a frosh leader. How-

ever, from others I have talked to who have already taken the five mandatory courses, it was a complete rehash of the old material and "a waste of time". I understand that a review of the policies may be necessary each year as people forget rules, however re-teaching old "leadership" skills is completely unnecessary and is an inefficient use of resources as well as budget from our student services fee. This budget could be better used to provide services to the students in other ways. A shortened refresher course may benefit students more compared to the seven+ hours of courses now mandated by the new OLT.

Leadership is something you learn through experience and it cannot be taught through courses. Being told in a classroom setting what to do in a situation where, for example, someone is hurt and an ambulance is coming for an event at SLC versus being there and knowing what to do are two very different things. A two hour course on "leadership" cannot teach you such skills. Waterloo, a school known for being hands on through co-op, should know better than anyone else that leadership is obtained through experience and not through courses. The Student Life

Office, as a part of the University of Waterloo, should know and understand this.

How can the office that looks after student life not consider the opinions of the majority of former leaders in something so important? As well, from what I understand, some of the FOC who were consulted were against this implementation. I am sure if the opinions of former leaders were taken into account the courses would be very effective and an even better Orientation Week could be run. However, the way that SLO is executing these courses will just lead to the same, already effective, Orientation Week that is one of the best in Canada.

If you have any questions or concerns about this topic I encourage you to write to the Student Life Office via Cora Dupuis (cedupuis@uwaterloo.ca) and Heather Westmorland (hwestmor@uwaterloo.ca). I propose we can create a new, more efficient, leader training program, perhaps with refresher courses for already qualified leaders. This current system is a waste of money and time for many people and I would like to see that money better spent serving the students. It is important that an office devoted to students actually cares about what students say.

“The Immigrant Dream”

JOE CHELLAKUDAM
EWB CORRESPONDENT

A random cross section of the student population here at Waterloo would be a pretty good representation of how the Canadian population is composed. What's more revealing is taking a walk through the various hallways on campus that contains our programs' graduation photos. It really gives us an idea of how multiculturalism in our population is becoming more prevalent. A lot of factors have contributed to the immigration boom in Canada, but what I would like to focus on is the one that made me choose to study at the University of Waterloo.

If you couldn't tell from my first name, then you will definitely be able to tell from my last name that I am of Indian descent. My father came to Canada in the late 70's, followed by my mother in the late 80's. Both of them had internalized the idea that North America was the land of opportunity, however, it wasn't opportunities for themselves that they had in mind. They were thinking about their unborn children. Opportunities for their children meant being able to obtain a high-quality education, graduate with a job that has a high starting salary, and being able to enjoy the riches of a successful life.

That's where my decision to apply to engineering came from. In high school

it was advertised to me as “it only takes five years of school to get a well paying job”. After a couple of terms, it became clear that what my parents had hoped for would come true. However, what also became evident was that there was more to engineering than just a good job. During my co-op terms and classes, it quickly became apparent that engineering is more than just a stable life: it's how ideas become reality. It's the driving force behind the growth of our economy. It's ensuring that we all have access to the amenities of life. It's a forum where problem solvers from all walks of life come together to tackle society's problems. As students we often lose sight of what it means to be a

part of a profession, and instead focus on what we can get from the profession.

This phenomenon is more than prevalent on our campus and is arguably one of the main reasons why many of us are here. However, I would just like to take a moment and ask people to really think about what it is you do in class, why you get involved around campus, what you work on during co-op? Who is affected by your work? I think you will quickly realize that it's more than just the people you know.

More articles on our blog <http://uwaterloo.ewb.ca/>

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Splashing out Poverty

EWB Day makes an Impact



ERIN MATHESON
3A CHEMICAL

With the impending doom of finals looming overhead and the CPH foyer slowly taking shape, but never quickly enough, it feels like a lot of students are saturated with too many last minute things to do before finals do start. With all of this in mind, I was really impressed with the impact Engineers Without Borders (EWB) was able to make with their EWB day on March 18. Amongst the many events they held during the day, I was able to see the information booth they had set up in South Campus Hall as well as the Splash Out Poverty event held in the courtyard at the Student Life Centre.

The main purpose of all of EWB's activities was to raise awareness, both about EWB as well as about what they work towards. They kicked off the day with their information booth in SCH outside of the Campus Store where they were handing out free cookies, needless to say they had a lot of hungry takers who were waiting in the 3 mile line for Tim Horton's. They used this to start the conversation with students about EWB, as well as what they're hoping to do through their work. EWB primarily works to eradicate poverty in third world countries. The work done overseas, primarily in Africa is similar to that of the well-known Doctors Without Borders, who work to bring health care to these same areas. The benefit of sending engineers to work in these areas is that they possess the skills to work with the residents of these areas to help them achieve things like accessible drinking water, usable roads, or safe and adequate housing. A lot of previous EWB initiatives have been focused on providing clean drinking water for villages in Africa.

The focus of EWB this year is one that resonates with a lot of people following the aide scandals associated with the Haiti relief work in 2010. There were a number of fraudulent charities established following the earthquake in Haiti, as well as government money being mishandled both in the States as well as with the Canadian International Development Agency (CIDA). The frustration faced by the public was mainly due to the lack of transparency by both their respective governments and the charitable organizations. Money was sent towards what appeared to be initiatives meant to help those in need after an intense natural disaster,

and sometime afterwards word finally got out that it never got there, all the while those in Haiti still suffered. Similar fears are currently surfacing both regarding ongoing charitable efforts in the developing world, as well as efforts for the recently earthquake-hit Japan. EWB is currently pushing the Canadian government to work to change this.

EWB is currently pushing to have the Canadian government sign on to IATI, the International Aid Transparency Initiative who works to connect donor governments, governments of developing countries and non-government organizations (NGO's) to work effectively and at full disclosure to the public. All participating organizations must agree to the IATI Accra Statement, which clearly outlines the requirement for all donations, initiatives and expenditures be made available to public scrutiny. There are additional clauses that also state that the organizations must also remain open to new possibilities on how to make the organization more transparent to the public. Essentially, the IATI ensures that the public is fully aware of where their donations are going and what is being done with them. It's a huge accountability effort that not only ensures that these groups remain truthful and that public money is not wasted, but an increase in this transparency trend may also encourage more donations from the public in the future should they be able to easily see what is being done with their donations. Currently, Canada is not a part of IATI, and the focus of EWB this year is to change that so charitable efforts from Canada can be closely monitored by the public eye and so another CIDA scandal doesn't happen.

Aside from their efforts overseas or on Parliament Hill, EWB makes a very impressive impact locally as well. During their splash out poverty event at the SLC, where brave EWB members donned the word

'poverty' in orange paint and encouraged students to splash them with water to wash it away, they asked each participant to make a pledge that would make a difference, like donating to the food bank or buying fair trade food. By the time I had left, they had already gathered a very impressive crowd and had made a number of pledges. It's difficult to judge the effectiveness of events that are gauged towards building

awareness since it's such an intangible thing, but EWB definitely succeeded.

If you want to get involved with EWB, you can attend one of the general meetings they hold multiple times a term, or visit their website at uwaterloo.ewb.ca, where they have a regularly updated blog and tons of great information. Congrats on a job well done EWB – hope you guys didn't get too cold!



Angelo Alaimo

Coffee Cup sculpture created by Engineers Without Borders Waterloo



Erin Matheson

Engineers Without Borders Executives get splashed with water to raise awareness

Japanese Engineering Protects Citizens from Wave of Disasters

JAPAN from Page 1

The highly-regarded seawalls that scatter Japan's shores as much as fishing boats, which were expected to hold off major tsunamis, failed to protect northeastern Japan from this month's disaster, as the tsunami easily swept over the seawalls and hit many key areas, specifically the Fukushima Daiichi nuclear facility near Ōkuma and the Fukushima Daini nuclear facility near Naraha. The former plant is now a major source of concern as the water disabled the reactor cooling systems.

Unfortunately, radiation issues from the nuclear facilities in northeastern Japan have caused more trouble following the initial incident. When the tsunami disabled the cooling systems at the Daiichi facility, three separate explosions occurred in the days that followed. The Japanese authorities responded by evacuating all regions within 20 kilometres of the plant, and all regions within 10 kilometres of the Daini plant in case of

an explosion at that facility. Engineers injected the reactor core at Daiichi with seawater and boron to cool it as an emergency procedure, assisted by military helicopters and police trucks equipped with water cannons. There was a temporary fire at one of the nuclear fuel storage ponds which directly released large amounts of radiation into the atmosphere. One week after the initial incident, Japan considered preparation for a last-resort "Chernobyl solution", where it would bury the plant in sand and concrete, leaving that section of the country off-limits for many years. The Japanese government did not believe it would come to that at this point, and if it does, they would still have to fully cool the reactor cores before they are buried.

The radiation concerns have had dramatic effects on Japanese society, especially within major cities.

The typically bustling and bright Tokyo is dark, quiet and empty, as power supplies are strained and the consensus amongst residents is that they don't want to breathe the outdoor air because something very wrong is going on at the malfunctioning nuclear facilities. The public's frustration with the lack of information coming from the government about the nuclear plants is rapidly increasing and aftershocks still shake the city every day, leaving those still there with worries about when the damage will end.

CECS has been in contact with the ten Waterloo co-op students who were in Japan at the time of the incident and gave them the option of leaving the country with the support of CECS and the employers. Foreign governments are helping citizens leave the country by ordering charter flights.

Companies are also making an effort to help victims of the earthquake by harnessing their corporate strengths. Apple Stores in Japan are known for being

some of the only public free Wi-Fi locations still operating around the country, and Apple has been letting citizens gather to use the Internet during the night. During the day, employees brought out surge protectors and extension cords for people to charge their devices so they can keep in contact with their families and friends. Displaced retail and corporate employees and their families were able to sleep in the store boardrooms and if they chose to leave the country until things improve, Apple assured them they will have a job when they come back. They also offered to pay for food and transportation in case money was an issue in leaving.

Google has set up a Google Crisis Response page where people can either find missing persons or upload information they have about them. Google also has transit routes, government agencies, shelter information, translation, message boards, phone lines and many other resources to help people in Japan or outside. Microsoft's assistance is more

business-oriented, but their contributions to getting the economy back up to par are not insignificant. Microsoft is committing \$2 million, which includes reaching out to organizations and customers to support relief and conducting impact assessments. They are also offering free temporary licenses for software to any impacted customers and governments, free incident support, a cloud-based disaster response portal based on Windows Azure, and 90 day use of their online Exchange and SharePoint services, all to help companies and customers continue operations. Various companies around the country have been restricting electricity usage due to the huge dent in electricity production cause by the nuclear reactors.

If you want to donate to helping the people in Japan, there are many outlets to help out. Apple has a page in the iTunes Store where users can directly donate to the American Red Cross, which can be accessed from Apple's homepage or from the iTunes Store

homepage. Google also has a spot to enter donations to the Japanese Red Cross on their Crisis Response page. On Facebook, the Red Cross has set up a Causes profile to fund relief efforts to which users can donate. The Canadian Red Cross is accepting donations on their website at <http://www.redcross.ca>, by phone at 1-800-418-1111, by mail or at Red Cross offices across Canada. If you want to help out people in Japan, donate via any of the previously mentioned services or to a charity you know is helping with relief efforts. Just be careful of fake accounts that claim to be donating but are really looking for your phone number or personal information. It's important to consider your own safety as well as the safety of others. Hopefully, the radiation in Japan does not rise much further and the aftershocks stop so the Japanese can get back to the life they once had.



From Left to Right, Top to Bottom: Tsunami waves surpassed sea wall defenses, businesses have attempted to limit power consumption in light of electricity shortage, quakes and subsequent aftershocks have wreaked havoc on all infrastructure, extensive damage to the Sendai Airport.



Sandford Fleming Foundation

Professionalism.
Leadership.
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There's more to an engineering education than engineering.



John Fisher & Roy Duxbury Leadership Awards

The John Fisher Award and Roy Duxbury Award for Leadership are given to undergraduate students graduating in the Faculty of Engineering who have shown outstanding leadership throughout their academic career in activities that relate to Co-operative Engineering Education.

Nominations for these awards can originate from student groups, faculty members, or other individuals. Letters of Support from colleagues, faculty, and others familiar with the nominee's accomplishments are extremely important and form the major basis upon which the Executive Committee of the Sandford Fleming Foundation will form its decision. Nominations must be submitted to the Foundation by April 1, 2011.

The John Fisher and Roy Duxbury Awards consist of a Certificate plus a citation and an honorarium of \$2,000. The awards have been named in recognition of the outstanding contributions made toward the Foundation by its former former Chairs, Dr. John Fisher and Dr. Roy Duxbury.

Nominations Must be Submitted to the SFF Office Manager by April 1, 2011.

E2-3336, Extension 84008, sff@engmail.uwaterloo.ca
www.eng.uwaterloo.ca/~sff

Marie Curie-Skłodowska - Mother of Radium

SYLVIA WU
WOMEN IN ENGINEERING
CORRESPONDENT

The Maria Curie-Skłodowska University in Lublin, Poland was founded in 1944, in honour of one of the brightest female scientists the world has seen. Just fifty years prior, no university in Poland would give the young Marie Skłodowska a research position, simply because she belonged to the wrong gender.

The Pierre and Marie Curie University overlooks the Seine River in Paris; it is the largest scientific and medical research centre in France. Established in 1971 following the division of the University of Paris (better known as the Sorbonne), it was where Marie Curie had earned degrees in mathematics and physics, and became its first female professor in 1906.

However, her professorship came at a steep cost: only after her husband's death in an accident, did Sorbonne's physics department decide to let her retain control over the Curies' joint laboratory and award her Pierre's position.

Marie Curie is famous for having coined the term 'radioactivity' in 1898. She did not, in fact, discover radioactivity, but she proved that this mysterious radiation must come from the atom itself, independent of

molecular interaction and external excitement. The Curies shared a Nobel Prize in Physics for their research on radioactivity.

The Curies also discovered two new radioactive elements during their research. Marie named polonium after her home, Poland, to highlight its lack of independence. Poland at the time was under Russian, Austrian, and Prussian partition, and would not be its own country for another twenty years. The isolation of pure radium came after Pierre's death. For this, she won a Nobel Prize in Chemistry, becoming the first person honored with two Nobel Prizes.

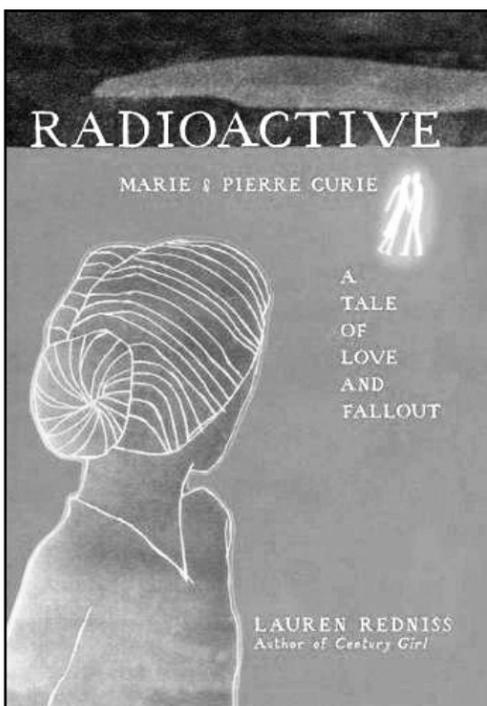
The discovery of radium would later provide a source of radio-

activity for Ernest Rutherford to probe the structure of the atom. Radium also offered a means to develop radiation therapy for the treatment of cancer. During World War I, Marie and her daughter, Irene, devoted themselves to building mobile X-ray vehicles so wounded soldiers can receive radiography diagnosis in the field. These units were nicknamed *petites Curies* and were powered by tubes of radium emanation.

Unfortunately, Marie Curie's work inspired some depraved applications as well. She refused to patent the isolation process for polonium and radium so access to these elements would be easy for other researchers. However, before the effects

of radioactivity could be thoroughly studied, private enterprises rushed to profit off these elements. Businesses claimed that radium had curative properties and marketed skin cream, toothpaste, and even food items containing radium. In the mid-1920s, a watch company used radium-based luminous paints to decorate the dials of clocks and wristwatches. The women who performed this work would often lick the tips of their paintbrushes to produce a finer stroke. Their exposure to radium caused anemia, and bone cancer. This was a first warning about the dangers of radioactivity. Marie Curie herself had been showing signs of radiation poisoning for years.

On a side note, Marie Curie hardly deserves to be credited with the invention of the atomic bomb. The grandmother of the atomic bomb, on a far stretch, can barely be attributed to Marie and Pierre's daughter, Irene Joliot-Curie. Along with her husband Frederic, she discovered artificial radioactivity, which allowed radioactive isotopes be created in the lab (for the intention of creating cheap radiation sources for medical applications). A separate group of German scientists discovered nuclear fission based on her research. From there, we can play the blame game with physicists on the Manhattan Project and the US Army Corps of Engineers.



Redniss' cover for her artistic book.

Message from Engineering Society 'B'

Over the last few weeks, more actions against women have taken place. The Engineering Society would like to condemn these actions as profoundly disturbing and unacceptable.

Some might see these attacks against women as isolated incidents perpetrated by a few rogue individuals. However, these pervasive issues must be addressed by everyone. We all need to work together

to build a safer community. A safe community makes it clear that sexism will not be tolerated. Together we can eliminate these issues and all forms of hate.

Systemic inequality is ingrained in our society. It comes from the way we communicate, the words we use and even the way we have been conditioned to think. Certain words and ideas that we use are inherently sexist even if they are not in-

tended to be.

Sexist comments are often defended with the argument that nobody was offended. The question is not whether or not the audience was offended, but what effect such a statement may have had on the community as a whole. The ramifications of these sexist ideas accumulate over the course of a university career.

We all need to think about how our

actions affect the people around us. The problem starts at the ground level in our daily interactions. If we build a stronger community that addresses problems about the way we interact with each other we will be better equipped to fight these issues in the future.

Sincerely,
Engineering Society 'B' Executive

UW Police Services Statement

DAN ANDERSON
DIRECTOR UW POLICE

UW Police are continuing their efforts to identify the source of the offensive posters that have been distributed on campus over the past month. The safety of our campus community is our number one priority.

It has been a month since the posters were first found on campus. Since that time we have seen additional posters

and Facebook postings. While many of the posters have targeted women; Islam, Ghandi and Darwin have also been the focus.

We have been working closely with Waterloo Regional Police, getting assistance with forensic analysis and consulting on investigative tactics. We have also enlisted the support of IST in trying to identify the source of the posters.

We are frustrated by Google and

Facebook, who will not share information that may help identify the sender because of their privacy policies. Their servers containing the information we require are housed in the US so our courts have no jurisdiction to order them to assist.

In an effort to address safety concerns, beginning Monday, March 21 and until the end of term, the majority of campus parking lots will be open and free of charge for use in the evening from 6:30 pm on,

enabling students to park close to their class or the library. Students are also encouraged to use the campus shuttles that operate between 7 pm and 2 am.

I encourage anyone with information that might assist us on this case to call UW Police at extension 22222, or to use the anonymous reporting module on the UW Police webpage or Crime Stoppers at 1-800-222-TIPS (8477)

Become Aware & Educated Attend the Women and Engineering Forum

ERIN MATHESON
3A CHEMICAL

There will be a Women and Engineering Forum on Monday, March 28th at 5:30pm in RCH 112. This forum will include speakers, student experiences and a discussion period. Speakers will include Professor Mary Wells and several faculty members, including a member from the Women's Studies Department. The latter portion of the event will consist of a discussion including topics relating to discrimination when on co-op, raising awareness and acquiring support from male peers.

There will also be time where students share their experiences on the subject, which is where you come in! If you have any stories regarding your experiences as an undergraduate engineering student either in school or on co-op be they positive or negative that you'd be willing to

share, please let me know! We're looking to have approximately 1 minute long stories from you guys to get some ideas going before we break out into discussion groups, as well as finally get some concrete examples of issues faced by women in engineering out in the open. Both male and female students are encouraged to speak, so it can be something you've experienced personally or have seen happen to someone you know either in school or at work. Please contact Cailin Hillier at cehillie@engmail.uwaterloo.ca if you are interested in speaking.

Remember, the entire premise of this event is about education. Knowing about the issues and become aware is the goal of this forum. Your participation is essential, so please stop by at any time throughout the forum to offer your thoughts or just listen in. Together, we can make everyone comfortable talking about these issues.

About the University of Waterloo's Women's Centre

MIDORI TELLES-LANGDON
2A GEOLOGICAL

The University of Waterloo Women's Centre was founded in 1981. It was designed to be a safe space on campus for female students, much like the GLOW Centre which opened in 1971. The Centre is staffed by a dedicated group of volunteers and is open regular weekly hours for students to drop by on the second floor of the SLC, Room 2102. The Centre is gender neutral, free from political affiliations, and queer positive. The main goal of the centre is to "be active against unfair or discriminatory treatment of women in society".

The Women's Centre has an extensive library of informational material, novels, zines, magazines and videos. These resources are free to be checked out by any University of Waterloo stu-

dent. Many of the resources are also available online through the Centre's website, <http://www.women.uwaterloo.ca/>. They also produce their own zine, called Voices of Women, which began in 1995. The content is entirely student written, and is available for free in the Centre. As part of their mandate to promote safety, the Centre provides free condoms, tampons, and safety whistles. Several events are run throughout the term, such as group discussions, movie nights, and larger events such as International Women's Week. They also run events in conjunction with GLOW.

The Centre is always looking for more volunteers. If you are interested, please contact uwwomenscentre@gmail.com.

Recurring Anti-Female Poster and Email Problem



ADRIANA CAMERON
3T MECHANICAL

Yet another poster depicting Nobel Prize winning scientist Marie Curie was sent this month via email to some Waterloo students and some professors in the Department of Women's Studies, which read "THE TRUTH... First she took Hiroshima and now she takes Fukushima. The devil always takes Manhattan before he takes Berlin!"

This poster is linked to similar posters found on campus in mid-February plastered on top of the election posters of female candidates running in the FedS Election reading "THE TRUTH. The brightest Woman this Earth ever created was Marie

Curie, The mother of the Nuclear Bomb. You tell me if the plan of Women leading Men is still a good idea!"

The posters aim to imply that nuclear weapons and the recent incident at the Fukushima Da-ini power plant in Japan are a result of Marie Curie's development of techniques for isolating radioactive isotopes and her contribution to the theory of radioactivity.

In addition to targeting women, some of the newer posters sent out also target Islam, Ghandi and Darwin.

Days after the first posters came out, an email was sent to some members of the UW community from a Gmail account impersonating University President Feridun Hamdullahpur. The fake emails expressed the President's support of the sexist posters. Several students have also received Facebook messages indicating

that women are morally corrupt.

At this time, the Waterloo Regional Police have been assisting in a forensic investigation of the posters. IST has also been contacted in an attempt to find the source of the posters. Attempts have been made to electronically track down the person or group of people responsible; however Google and Facebook, whose servers are located in the US, will not disclose information about the sender as per their privacy policies.

In response to the continued incidents and the concern expressed by students about safety, UW Police have taken several measures in order to increase safety on campus. Since the poster incident and fake email were sent out a month ago, there has been an increased police presence on campus.

Until the end of the term, parking will

be free in most lots after 6:30 pm. For those who don't drive, and don't wish to walk in the evening, the University has both an on-campus shuttle, and an off-campus shuttle available to students free of charge. The on-campus shuttle operates every evening from 7:00 pm until 2:00 am. The off-campus shuttle departs from the SLC every hour at quarter-after, starting at 7:15 pm and ending at 1:15 am.

Although there has been much talk about the posters and emails, very little factual information about the incidents is available. Most of the information surrounding the incidents has infiltrated campus in the form of hearsay and rumours.

The incidents have also received media attention outside of campus, including several articles in The Record and video pieces from CTV News.

Proposed Bylaw "Slap in Face" to Student Renters

HOUSING from Page 1

For units wishing to get licenses for dwellings with greater than 3 rented units, they must either get a Class C (Boarding House) or Class D (Lodging House) License. Class D licenses are grandfathered Lodging House licenses from the current legislation. Boarding houses will have their own, more stringent, licensing regulations described in the table of license types. The grandfather clause (Class D) will stay in effect until the owner switches ownership of the dwelling. The grandfather clause causes some significant advantage in the market for those that are able to get it which is anti-competitive. Other owners may have trouble competing due to the fact that Class D license holders do not have as stringent regulations.

Landlords will now have to provide site, snow removal, garbage disposal, and parking allowance plans, in addition to basic electrical and plumbing certifications currently required when applying for a license. This is part of an attempt to ensure that rental units are safe and not unsightly for their neighbours. A police check will also be a new addition to the application package, which is meant to ensure tenant safety since landlords have access to all units.

Mandated in this proposed bylaw is minimum area for bedrooms, living rooms dining rooms and kitchens (75, 145, ~35 and

45 sq. ft respectively). These requirements should not be too difficult to conform to for many units. Some units, especially those without a dining room or living room for example, may have some added renovation costs.

Licensing costs are in the \$400-\$700/year depending on the class of the unit. Another cost will lie in getting site maintenance and floor plans done and getting an HVAC technician certify the ventilation system. The police check will also cost a small amount for the landlords to get. Although the aforementioned costs will add some costs, the major costs will lie in renovations required to bring non-lodging/boarding houses into compliance with the 3 bedroom limits. Many units will require significant renovation which may lead to landlords ceasing to rent units or renting them illegally.

The proposed bylaw cites three major motivators behind these sweeping changes. The first is to protect the health and safety, as well as human rights of renters in Waterloo. The second is to ensure that essential services, such as plumbing, heat and water, are readily available in each unit and are safely installed. Finally, the city wants to "protect the residential amenity, character and stability of residential areas". These three formidable goals are meant to provide the highest-quality rental housing possible.

The city wishes to "Protect the residential amenity, character and stability or residential areas" in Waterloo. Unfortunately, this law accomplishes this at the expense of renters in Waterloo.

The representatives of the city freely acknowledge that these proposed changes will adversely affect the availability of low rise rental units in Waterloo. Waterloo decided previously that "Student Precinct" style housing (aka the Northdale "Student Ghetto") was not an option for Waterloo. Instead, they have decided to go with "Node and Corridor Intensification" meaning that they

will allow apartments to replace houses on major arterial. This can be seen already in the Northdale area of Waterloo (around University and Lester for example). Thus, the city's way of protecting the "character" of Waterloo's residential areas is to reduce the student impact on its neighbourhoods. This is being accomplished by the reducing low-rise rental unit availability through the prohibitive legislation in this new rental unit bylaw while simulta-

neously approving as many boring apartment complexes as possible on transit corridors. These apartment units do not have to comply with any legislation set out by the city. The average number of bedrooms per apartment is ~4.7 instead of the mandated 3 bedrooms in this new bylaw. When asked why these apartments should have preferential treatment in the market the city would only say that apartments are provincially legislated and adhere to provincial safety regulations. This law tries to get rid of "Student Precinct" areas by reducing the availability of low-rise housing while the city simultaneously approves apartments to be occupied by renters. This law attempts to "protect the residential amenity, character and stability or residential areas" by moving renters into high rise apartments.

Within the bylaw, council could potentially mandate that the law should "protect the health and safety and human rights of persons residing in residential rental premises" but it falls short of this goal as well. Fire regulations, electrical regulations and building code are already in place under current legislation and this law does not change that legislation. In order to get a rental license it is not required to get a building inspection. It should also be noted that under current legislation, if there is a safety issue with a rental unit renters can call bylaw and bylaw can mandate the landlord to fix issues or face fines. The new law puts minimum square footage requirements for bedrooms, etc. on low rise rental units but in reality the free market already puts limits on room size. If a renter wants a bedroom that isn't an old broom cupboard they will find a unit that meets that requirement.

The same thing applies for the caveat that the law should "ensure that certain essentials are provided in residential rental premises such as plumbing, heating and water".

These already fall under Ontario Building Code legislation and is enforced through the City of Waterloo. Violations and complaints can already be lodged through the city. Thus the inspections through this bylaw will have minimal affect other than giving the city another outlet to enforce conformance to legislation that is already in place.

Although the caveats of the bylaw legislation seem to be beneficial, the law falls short of delivering many beneficial improvements for renters. In some cases, such as the goal to protect the character of neighbourhoods, it actually significantly infringes on students ability to freely choose where they want to live by using carrot and stick incentives to get more students in "node and corridor" apartment complexes which fit in the City's long term plans.

The current proposed bylaw is a slap in the face to student renters in Waterloo. While the city claims that it applies equally to all renters across Waterloo, the three bedroom limit and the concurrent approval of high-rise buildings in student dominated areas shows that this is a direct attempt to limit students mobility in choosing where to live. One has to wonder why the city had to consult the Ontario Human Rights Commission in developing this legislation. It seems like it would be an extraneous step unless they were actively tiptoeing around the elephant in the room in this case that the law directly targets students.

If you've already graduated, about to graduate, or are going to be in Waterloo for the a few more years, it is still important that you educate yourself and direct concerns, comments and questions to Ward 6 Councillor Jeff Henry at jeff.henry@waterloo.ca or FedS VP-Education Nick Soave at vped@feds.ca. The future of student housing is on the line, and will impact students in Waterloo for decades to come.

License Class	Description of Rental Housing License Class
A	<ul style="list-style-type: none"> Requires Kitchen, Bedrooms, Living Room, Dining Room w/ minimum square footage No more than 40% of gross floor area bedrooms No more than three (3) bedrooms
B	<ul style="list-style-type: none"> Requires Kitchen, Bedrooms, Living Room, Dining Room w/ minimum square footage No more than 50% of gross floor area bedrooms No more than three (3) bedrooms for rent Property is owner occupied (renters live with owner)
C	<ul style="list-style-type: none"> Termed a Boarding House Minimum separation of 75m between boarding houses (~ 1.5 hockey rinks distance) Conform to lodging house/ boarding house fire standards Must comply with Ontario Human Rights Code Must not exceed 600 sq. metres footprint and not over 3 stories 2 Bathrooms, 1 Kitchen max Over 4+ bedrooms (1-3 fall under other licences) Double occupancy allowed for a maximum of one bedroom Requires Kitchen, Bedrooms, Living Room w/ minimum square footage
D	<ul style="list-style-type: none"> These are Grandfathered Lodging Houses from current rental legislation Must have lodging house license currently to apply (will be clearly posted in dwelling if it exists) Must be granted within 3 months of new law or it expires Cannot be renewed after license expires (if ownership changes) Requires Kitchen, Bedrooms, Living Room, w/ minimum square footage
E	<ul style="list-style-type: none"> For Temporary Licensing Extends up to 18 months then must be owner occupied for two years before renewal Requires Kitchen, Bedrooms, Living Room, w/ minimum square footage No more than 40% of gross floor area bedrooms No more than three (3) bedrooms

Women & Engineering Forum




Get Facts
Discuss Issues
Ask Questions
Listen and Learn
Support for your peers.
Everyone is welcome!

Monday, March 28th
5:30 to 8:30 pm
RCH 112

UW Baja SAE Unveils Their New Car



JON MARTIN
3A CIVIL

The University of Waterloo Baja SAE (Society of Automotive Engineers) team unveiled their 2011 car on March 16, in the E5 Student Design Centre. The team is traditionally made up of 4th year Mech Eng students, with support from younger years and other interested engineers.

Many of the components are designed and built as the 4th years' design projects, things like the frame, front and rear suspension systems, gearbox and differential, and many other components of the vehicle. In every component, one of the main considerations



Jon Martin

The UW Baja SAE team unveiled their new car shown in the above picture in the E5 student design center.

is weight reduction and improving the ease of manufacturing, to increase speed and reduce cost.

The SAE competition includes pre-race inspections of the vehicles, followed by mini competitions including top speed, acceleration, hill climb, and manoeuvrability. The main competition is a grueling four hour endurance competition, to test the vehicles, and the teams, to their limits. The goal of the race is simply to complete as many laps as possible, repairing issues as they arise.

This season's competition will be 'Baja SAE Illinois' hosted in Peoria, Illinois, USA, from June 8th to 11th. Keep checking out their website, www.eng.uwaterloo.ca/~baja/, for updates about the competition and the development of the car.

Baja SAE 19 Years Ago

Letter from an Alumnus

BARRY YERXA
MECHANICAL 1992

With the 2011 edition of the Waterloo Baja SAE car about to be unveiled, I have been asked to write about my Baja SAE experience from 1992. The Baja is one of the SAE-sanctioned engineering competitions that 4th year students can undertake as part of their curriculum. It involves designing, building, testing, promoting, and ultimately racing a small-scale, off-road prototype vehicle. The competition is three days of tests and events ranging from static evaluations to dynamic tests such as acceleration, top speed, skid pull, hill climb, and maneuverability events. It all accumulates on the last day with a grueling four-hour endurance race.

Looking through the Waterloo Baja SAE website (<http://www.eng.uwaterloo.ca/~baja/>) I am struck at how much more professional the team has become compared to my time: A larger, more organized team able to do a more thorough job on all aspects of the project. However, the basic formula remains the same to this day: build an off road car using a spec engine that satisfies the often conflicting needs of safety, performance, and durability.

I had set my sights on the Baja competition almost as soon as I started at Waterloo. Being a pro motocross racer at the time, the Baja project was easily the most appealing way to accumulate some credits. However, the rigors of third year had drained the life out of most students so it was a tough sell to

recruit. In the end, the 1992 Waterloo Baja SAE team consisted of just four members: myself, Steve Watts, Mike Doupe, and Rob Wolf.

We were on a shoe-string budget as the economy was deep in the dumper and WEEF was in its infancy. Fortunately, our skill set was strong. I had access to the nation's top off road car racers for advice, Mike had extensive small engine repair experience, and Rob and Steve had related automobile manufacturing and repair backgrounds. Consequently, it was divide and conquer. I was the chassis man, Mike handled the drive train, Steve owned the seating and controls, and Rob was responsible for ensuring we met the safety requirements.

It was a ton of work, but we were able to meet all of the required milestones (barely) such as getting the design brief submitted, welding the chassis tubes, attaching suspension and wheels, and mounting the drive train just to name a few of the bazillion tasks that needed to be done. Of course many things did not go as planned. A classic example was the transmission. Mike designed and constructed a custom transmission box complete with an internal differential. Very cool indeed except nobody stopped to make sure we were driving the clutch the correct direction. It was one of the more deflating setbacks, but like any good team of engineers we did the "duct tape and bailing wire" thing by winding a custom clutch spring and we were back in business.

Finally, one sunny day in May, the car

was ready for its maiden voyage. Like kids at Christmas, we rolled the car out behind engineering and fired it up. It was the moment that made it all worthwhile – the car was a blast to drive! We took turns zipping up and down ring road, across the railroad tracks, over the grass berms, and around the parking lot where E5 now sits. Security eventually paid us a visit and requested we stop buzzing people on ring road, but we now had renewed energy to get the car ready for the competition.

The 1992 Midwest Mini Baja competition was held in Milwaukee and we arrived on the Friday morning ready to go. We were definitely a rag tag group. Many of the 70+ teams from across the US and Canada had substantially larger budgets than us, with box vans, awnings, large tool chests, welding equipment, and other amenities that made our basic pickup truck setup look anemic. Friday involved tech inspection and static judging, which went surprisingly well. This allowed us to retire early for some much needed sleep. The constant flashes of other teams welding throughout the night in the hotel parking lot was surprisingly reassuring as we knew our car was ready to go while other teams struggled just to get their cars together.

Saturday brought the dynamic contests. Tennessee Tech's entry became the obvious favourite right from the start – they had built a car that was smoking everyone else. But we kept plugging along, never winning any competition but far from being the worst.

Sunday was the endurance race event.

Everyone raced together on a motocross track for 2 ½ hours and the results were worth almost half the point total. Our car proved to be a work horse. Not the fastest; it kept going strong until the end. It even survived a double end-over-end flip by one of our more enthusiastic drivers! At the finish, the Tennessee Tech car crossed the line first, cementing a dominating win. However the big surprise came at awards ceremony Sunday evening. We had no expectations and based on our visually low key effort we were way under the radar. To the surprise of many (and dismay of some high budget teams) the University of Waterloo entry was announced for 4th place overall. Short on sleep and having ingested a quantity of beer by this point, we sure whooped it up!

In the following weeks a re-tallying of the results (and I believe some belly aching by a couple of big name US schools) dropped us to 7th overall officially. But at that point it mattered little to us. We had exceeded all of our expectations in the competition. It was by far our most challenging yet memorable time at UW and it taught us real world engineering skills that have proved invaluable in our working lives. These are the same types of challenges and rewards that await the 2011 team, as they have for every team before them. I wish good luck to the team in Peoria in June and have one request – give 'em hell and have fun!

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Nevada Grading Fiasco



JON MARTIN
3A CIVIL

Crime doesn't pay, especially when it comes to grades. 19 year old, Nevada student Tyler Coyner was able to obtain the password to the Pahrump Valley High School's computer grading system. Once in the system Coyner not only changed his own grades but those of twelve other students at the school, for a price of course. Everyone who has watched Ferris Buehler's Day Off probably remembers when Ferris hacks into the school's computer and changes his own grades. In this case we laugh it off because he only gives himself a passing grade as well as removing some absent days – and of course it is fictional, that might have something to do with it.

Coyner went a little farther than passing grades, already a top student, he increased

his grades to make himself his graduating class's salutatorian - the student with the second highest average. At his graduation ceremony, following the valedictorian's speech, Coyner gave his salutatorian speech. The speech is available on Youtube, where he talks about his experiences in highschool and how he "changed for the better." Coyner is currently enrolled at the University of Nevada. His dorm was searched as part of the grade changing investigation, on an unrelated note they found a stolen television, a fake driver's license and a bunch of fake IDs. He is now facing burglary charges as well as conspiracy and forgery charges, which carry a jail sentence of two to ten years by themselves. Good to see he is getting off to a good start at university.

I am actually surprised that I haven't heard of more instances of hacking here at the University of Waterloo. Maybe Waterloo Works was brought down by a random hacker? Who knows!

Nanorobotics to Shanghai



JACOB TERRY
1B NANOTECHNOLOGY

The University of Waterloo Nanorobotics Group (UW_NRG) will be attending its second National Institute of Standards and Technology (NIST) Mobile Microrobotics Challenge, this year in Shanghai, China from May 9-13, 2011.

UW_NRG is a student team formed in 2007 by four students in Nanotechnology and Mechatronics Engineering. The team has grown to over 25 students with backgrounds in Nanotechnology, Mechatronics, Electrical and Computer Engineering. UW_NRG is sponsored by companies such as Advanced Micro Devices, RIM and Sun Microsystems, as well as through WEEF, and makes use of both the University of Western Ontario NanoFab and the University of Manitoba NanoFab.

This year's challenge requires teams to send their robots through a course as fast as possible. The course is designed to simulate medical applications such as robots that travel through blood vessels. UW_NRG is working on two robots this year: one called EMMA 2.0, named after last year's EMMA (for ElectroMagnetic Microrobotic Actuation) which improves on its predecessor, and a microfluidics-based robot which is controlled using a laser.

This competition follows their third place finish in the 2010 NIST Mobile Microrobotics Challenge in Anchorage, Alaska, where they placed third out of the eleven competing teams. The team was the only Canadian and only undergraduate team to compete. Their robot, EMMA applied Waterloo's research in nanosized electromagnetic attraction. It managed to reach times under a second on dash competitions consistently but could not manipulate objects due to orientation issues. Hopefully, the team can perform as well or better than last year.

Rebranding Classical Aneurysm Surgery The Right Way



ERIN MATHESON
3A CHEMICAL

As a Waterloo Engineering student, I feel like I have a slightly higher than average knowledge on lasers, as well as their many potential applications. We've seen them used in the military, in cosmetic surgery, or as the cornerstone of a rebranding campaign. One of the latest applications that's been attracting a lot of attention is for use on your brain – laser brains! Well, not quite, but it's still exceptionally impressive. A surgeon at the Toronto Western Hospital is making a name for himself as the master of the laser surgery, in which he uses tiny fiber optic lasers to fix brain aneurysms that normally would not be repairable.

An aneurysm is the swelling of an artery due to the weakening of the vessel wall. The exact cause of an aneurysm is unknown, although factors such as genetics and nasty habits like smoking, high blood pressure and high cholesterol are known contributors to the formation of these swellings. There are a handful of places where these swellings can occur, including the intestine, legs, the spleen and the aorta. The most common, and unfortunately most hazardous, are when these swellings form in the brain. These often present with no symptoms, but can cause numbness, pain, blindness, dizziness, depending on where in the brain the aneurysm is located and the degree of the swelling. The most frightening problem occurs if and when the aneurysm ruptures, during which the patient often experiences an increased heart rate, decreased blood pressure and light-headedness. The risk of death after an aneurysm rupture is extremely high, particular in cases where it was previously undiagnosed.

In the cases where the swelling had been identified via a CT scan, surgical intervention was often required to repair the swelling. The most conventional methods used either a stent, a coil or a highly risky bypass procedure. A stent would be a small tube that was inserted into the vessel to essentially counteract the damage experienced by the vessel walls. However, this method could not be very commonly used. In some cases, a very thin platinum wire can be fed through the major vessels, starting in the leg, eventually up to the site of

the aneurysm where the swelling can be coiled shut. Bypass involves essentially stopping the blood flow to that particular vessel where the swelling occurs by using very small clips that close the blood vessel so an alternative pathway can be built for the blood to flow through. Not all cases are eligible for this treatment however, depending on the location of the aneurysm within the brain, and the procedure is very risky. There is a considerable risk associated with these clips slipping and rupturing the vessel wall in the process, which in some cases can cause the patient to bleed out. There are also a significant number of patients who are not eligible for any of these procedures due to their condition and nature of aneurysm, so they are left with no option but to sit, wait and hope for the best.

Enter Michael Tymianski. As the current acting head of Neurosurgery at Toronto Western and the head of a research lab at the Krembil Neuroscience Centre, he's seen his fair share of these tragic cases where little could be done to help. In 2008, he traveled to Holland to learn a new procedure that utilizes fibre optic lasers for a new procedure, best described as 'rerouting a river without ever stopping the flow of water.' The procedure

utilizes some small vessels harvested typically from the leg that are first attached to the same vessel on each side of the swelling. A very tiny laser is then fed into each of these attached blood vessels and is used to cut a hole into the main artery. These vessels are quickly clipped shut after the laser is removed, and the two vessels on each side of the swelling are then attached. When the clips are removed, the blood flow within the artery can then be redirected to the newly formed bypass and away from the weakened artery, all without every having to stop blood flow in the artery. This greatly increases the number of potential candidates who could potentially benefit from this surgery, most of whom would previously have gone untreated at the rate of an estimated 100 people per year in Canada.

After returning from Holland, Tymianski was pumped with the knowledge that this very technically demanding yet promising surgery presented. The only problem? Them lasers don't come cheap. The highly precise laser required for the procedure costs \$300,000 which isn't exactly within the McGuinty budget. Enter real estate mogul Ron Kimel, who donated the money required to purchase the laser. A small price to pay, Kimel explains,

as he credits Tymianski with saving his personal assistant's life after she was diagnosed with a severe brain tumor. "She had a brain tumor. It was pretty serious. He took it out. As a gift to Mike I put up the money to buy the laser. It is as simple as that. The fact is, he is a great guy and we are friends. He is brilliant and talented and he has this heart, and kindness," Kimel explains.

Tymianski has performed the surgery over a dozen times since. Although they have not all been perfect endings, he has had an extremely high success rate and has saved lives already. The full medical and nursing staff at the Western, which is already considered one of the top neurological centres in North America, are very used to seeing the extreme when it comes to neurological patient care. As a result, the whole procedure from checking the patient in to sending them home has been made a huge success, and they're already starting to mentor other medical centers on the same procedure in hopes that it will eventually be able to help more of those in need. It's truly become a medical marvel that is something to make Toronto Western proud; now let's just hope it doesn't become subject to tragic rebranding.



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Farewell from President Rankin



SCOTT RANKIN
PRESIDENT

I wanted to take the time to say a final goodbye to everyone here at Waterloo as the outgoing Engineering Society President.

I honestly cannot believe that both the 16 months of being president and my five years here as a student have gone by so fast.

The Engineering Society has meant a lot to me over the past five years, and being your president has drastically changed me as a person. I will forever be glad I held the role. It has honestly given me much more than I could have ever asked for.

I've missed everyone I have had the

chance to know here at Waterloo, before I was even gone. During the good times we had together as a friends, I was secretly watching the clock wishing it would slow down so I could spend more time here and with all of you.

Everyone I have met here at Waterloo has had an effect on who I am today, and for that I am truly grateful. I want to thank each and every single one of you for everything you have given me, and hopefully the sacrifices I have had to give as your president has paid back even a small amount of the debt I owe you for how you have affected and changed my life for the better.

Thank you so much to everyone I have known here at Waterloo. I am beyond grateful for getting the chance to know you, and I will always remember everything you have done for me.

Thanks, Scott



KEVIN LING
VP EXTERNAL

Bus Push is taking place at 9:30 am this coming Saturday, March 26. Be sure to sign up in the EngSoc office and online if you would like to participate. Also, make sure you grab a pledge form and start collecting donations quickly. Bus Push is our annual charity fundraiser where the Engineering Society pulls a GRT bus from campus to Kitchener. The target this year is to raise \$5000 dollars for the Heart and Stroke Foundation. Keep an eye on the mailing list for more details as they come out.

That's it for event announcements! My role with EngSoc is finally starting to wind down. Thanks to all my great directors and everyone who helped out with events over my two terms in office. I had a great time serving engineering students as one of your EngSoc execs. Thanks again for this opportunity!

Yasser Al-Khder will be taking my post for the next sixteen months. For the remainder of the term I will be gradually transitioning him into the VP External portfolio. I am confident that he will do a great job.

That's all. We had a good run.

klings@engsoc
\$ logoff

New Scholarship Bank, News and a Call to Action



ALEX HOGEVEEN RUTTER
VP EDUCATION

EngSoc has released a scholarship bank! It is now accessible at <http://engsoc.uwaterloo.ca/scholarships>

We are adding scholarships and looking at how the usability can be improved, so scholarship contributions and suggestions are welcome.

On a related note, make sure you submit exams to the exam bank for P**5 points and to help out your peers.

Policy

Nick Soave is trying to push a policy that new professors would have mandatory training through the Centre for Teaching Excellence. It would be a long way off if it happened, but obviously we are supportive and hoping for the best.

ESL 110R (<http://www.ucalendar.uwaterloo.ca/1112/COURSE/course-ESL.html#ESL110R>) has been included as a List D elective. I am somewhat worried this is a stop-gap measure, and not addressing the root issue of a greater number of students coming into the Faculty of Engineering unprepared in Eng-

lish and Canadian workplace expectations. I have expressed this concern to administration and discussed additional courses, higher standards (for admission and milestones like ELPE) and perhaps even a program similar to Math ELAS, where students with poor English skills are admitted conditionally, dependent on completion of additional English courses. Hopefully the administration recognizes this mounting need and will properly address it moving forward.

After a second reading at UOPS, the midterm policy Sasha and I tried to move was once again bogged down with implementation issues. I will be working with the Associate Dean of the Faculty of Environment to rectify said issues, which will hopefully then go through in April.

Co-op News (or lack thereof)

- The plan to address chemical engineering jobs has been delayed until summer, but hopefully will be successful then.
- Organizational redesign, which will hopefully address a lot of our problems, will be released later this month
- Still waiting for more info on improving Jobmine and will be working on this through April
- As always, employment statistics are available at www.cecs.uwaterloo.ca/students/statistics.php

students/statistics.php

Interesting stuff from other Faculties

The Faculty of Mathematics is looking at relaxing their graduation requirements: allowing students who have too many un-cleared courses to graduate to take extra credits to compensate. (eg. rather than 18 units passed and < 3 failed units, 19 units passed and <3.5 failed units). While the implementation details would work completely different for engineering, hopefully this will pave the way to have more flexible graduation requirements.

On a related note, I have instigated discussions about allowing students more flexibility in their terms (eg. dropping courses and part-load terms). Hopefully future EngSoc executives and faculty will be able to move forward with providing greater flexibility to UW Engineering Students.

The Math Faculty has created Econ 103: a course designed to combine elements of Econ 101 and 102, providing students with a background in both macro- and micro-economics in only one elective. I have inquired as to if this course can be expanded to engineering students.

WatPD

We have been reviewing the role of writing in an engineering education.

Clearly there is inconsistent instruction of writing skills in engineering, and we are looking at elevating the standard of writing for students across the departments.

Participation rates in PD20 remain relatively high, with very high success rates. I will be continuing to review the curriculum to ensure it is meaningful to engineering students. If you have experience in this course and comments to add, make sure to let people know, whether it be the course instructors or myself.

Unfortunately, I will be unable to see through to conclusion many of the initiatives outlined in this report. It is up to you to hold incoming VP Education Owen Coutts and other future executives responsible to help improve our education. While I wish I had done a better job at communicating my tasks to the Engineering Society, I had hoped that people would have been less hesitant to ask me questions about what I'm doing, share their opinions and demand action. While I do take responsibility for not sharing enough and being as inviting as possible, the Engineering Society must take action to let the future VP Education (and other executives) know what their priorities are. Best of luck to Owen and others in fulfilling those priorities.

Canstruction Takes On the Yellow Submarine



MICHAEL SELISKE
2T COMPUTER

'Twas the night of canstruction and all through the mall, people were whirring, straight through down the hall. The cans were stacked, up high with care, in hopes that the foodbanks shelves won't go bare.

On March 12th, 13 teams of builders and 37,000 lbs of food converged on Conestoga Mall. Ten hours later in the early morning of March 13th, uniquely different can sculptures stood complete and Waterloo Engineering Students were along for the ride. A team of 7 builders from various disciplines and years, banded together to brainstorm, design and then build a structure out of cans.

With a generous donation of \$2500 from Research In Motion, the team used over 2000 cans to construct a yellow submarine out of a mix of no name tuna, soup, sardines, turkey and pasta. Starting at 6:30pm and running until after 1:00am, the team of Kevin Ling, Melanie Snow, Ahmed Mezil,

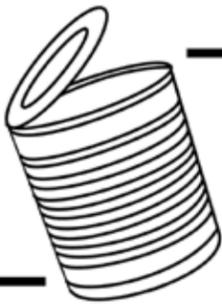
Kirusha Srimohanarajah, Yasser Al-Khder, Michael Seliske and Nizar Hisan worked their tails off to create the best Yellow Submarine ever. There were a few hiccups and rebuilds along the way but by the end of our 10 hours of building, a wonderful submarine surfaced out of the floor.

Canstruction is a North American annual event which encourages members of the community to collect and raise donations of food, in order to build a piece of art which can be shown off to the community. Winners are declared in each of several categories at local competitions and then move on to compete at a North American level, where grand champions are selected. Once the art has been displayed to the public and thoroughly enjoyed, the creations are dismantled and the food is all donated to the local food bank. At the Waterloo region event alone, there were 14 structures created out of 34,000 cans of food. The event was a huge success and Waterloo Engineering is proud of their creation. Check the EngSoc website at <http://engsoc.uwaterloo.ca> for an update on how they did in the judging.



Mike Seliske

Waterloo Engineering Canstruction Team behind their structure after completion in 6.5 hours



Jacob Terry, what's a twitter???



We have acquired The Internet by setting up an apple trap

New UW Website to Blame for Increased Theft on Campus

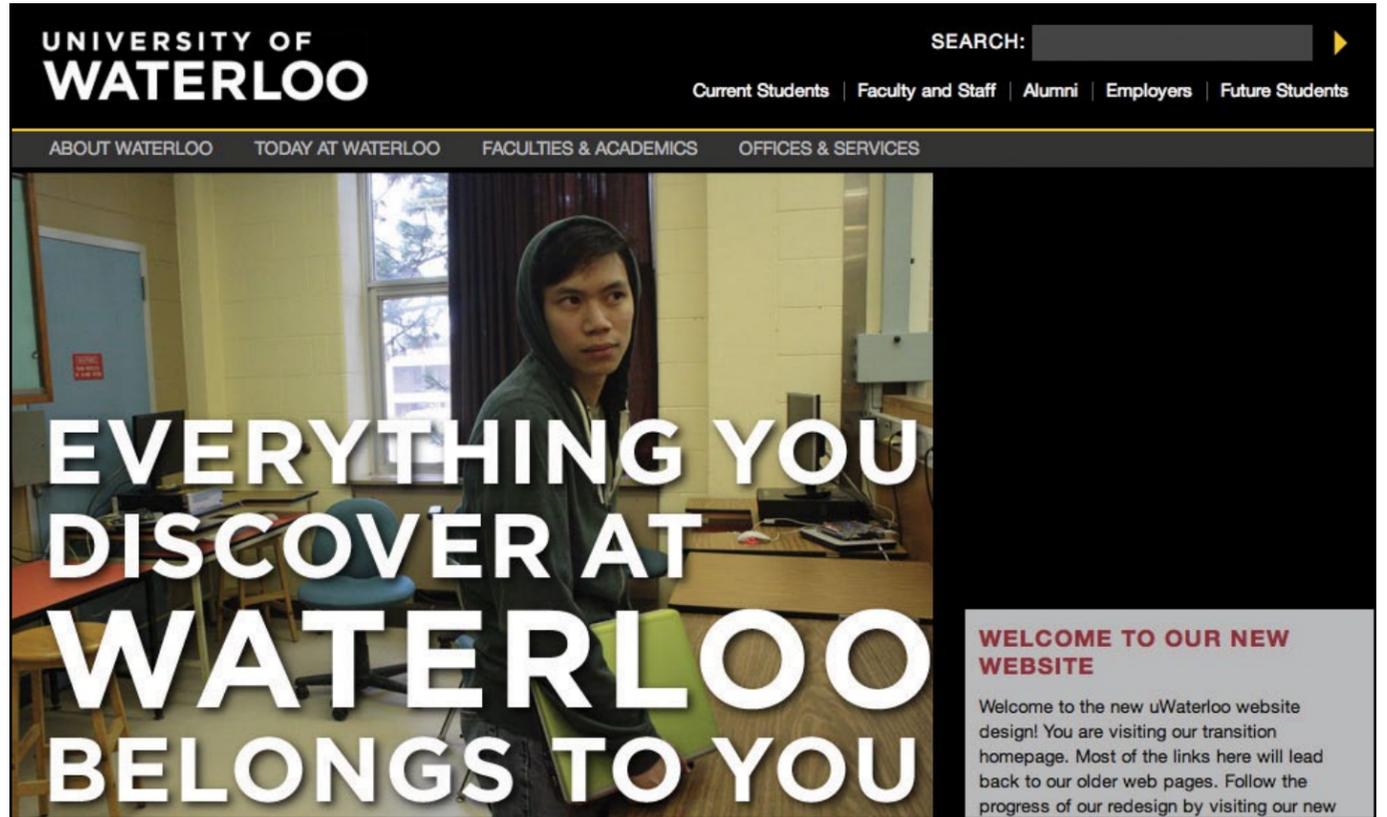
KEVIN LIANG

TIN SOLDIER POLICE SERVICES

Last Monday, campus police announced an increase in the number of thefts have hit campus. The large majority of reported thefts consist of laptops and textbooks, but there are also cases of missing or stolen lab equipment such as multi-meters, pipettes, and larger ticket items like oscilloscopes and gas regulators. This is of course a concern to students, and campus police encourage students to not leave possessions unattended.

Asking a stranger to watch your stuff while you go to the washroom is discouraged by campus police as there is no guarantee your things or the stranger will be there when you return. The stranger sitting across the table from you is no less likely to steal your stuff than anyone else in DC. Campus police are currently conducting an investigative report and looking into increased security measures in high traffic areas. Preliminary reports indicate that larceny on campus have been increasing exponentially since the end of reading break.

My personal intuition is that this date coincides with the launch of the university's new website. In big, bold, white lettering on the front page is the phrase "EVERYTHING YOU DISCOVER AT WATERLOO BELONGS TO YOU."



Have you seen this man? Campus police are advising to not trust anyone, not even yourself...

rything...at Waterloo belongs to you." Confusion of our new slogan might have caused this sudden acceleration in crime.

It is still too soon to tell but if my conclusions are correct the new website will go down the same route as our laser logo. Sa-

rah Forgrave, project manager of the web redesign project, was unable to comment on this topic as of press time.

ECE Department to Become Bi-Lingual

TIN SOLDIER
"NEWS" BUREAU

The ECE department has been seen in recent times as pretty boring. Most ECE students tend to themselves and just like being alone with their books, not socializing with the outside world. To accelerate this trend and ensure its continuation, the ECE department has decided to become Bi-lingual and accept binary as a second language of the department.

This move shall help students isolate themselves from the outside world as no other department/faculty/university/city/region/province/country/continent/world/

solar system/galaxy/universe/alternate reality known to mankind is known to use a machine language as an official language. Students in Environmental Engineering are denouncing the change as a "waste of resources" as every ECE printed material will now become 8 times longer in addition to its regular ASCII English counterpart. The pro-binary movement reminds Environmental Engineering students that it is environment-damaging decisions like these that will ensure Enviro eng students will have relevance in the future. Overall, The Tin Soldier would like to congratulate the ECE department for embracing Waterloo's new image in being more "risk-taking".

UW Prof Finds Alternative Fuel in Broken Dreams

STATIC KLING
HOPELESS ENGINEERING

Professor Jason X. Krueger and his team of graduate students from the University of Waterloo's Alternative Fuels Department have recently made breakthrough discoveries in the field of harnessing broken dreams as energy. These revolutionary discoveries will likely spark a massive paradigm shift in the energy industry as we know it.

Broken dreams, like fossil fuels, are naturally occurring. Krueger's research also shows that the formation process of broken dreams is similar to that of fossil fuels. Fossil fuels are made from dead organisms being compressed under the earth for thousands of years before turning into useable forms of fuel. Broken dreams, similarly, are created from students who crack under the immense pressure of their parents and society.

"The best part is that the broken dreams can be extracted from students without harming them, at least not further," explains Professor Krueger. "The students will con-

tinue to live mundane and unexceptional lives, and likely produce offspring that will only end up resenting them."

The fact that the discovery was made at the University of Waterloo comes as no surprise to many. Being a university with such a large focus on academics in technical fields, that has a complete disregard for student life, the University of Waterloo created the perfect environment in which to find broken dreams. While the distribution of broken dreams among the school population can vary, it has been empirically observed to be as high as 50% in some academic groups such as the debutant Management Engineering class.

With the unstable price of oil in today's economy, Krueger's research into fuel created from broken dreams is but another sliver of hope into the goal of replacing conventional oil with a more sustainable and cleaner fuel source. While this technology is not quite ready for mainstream consumption, Professor Krueger is optimistic and says we may be as close as one failed MCAT away.



WATERLOO
ENGINEERING
BREAKING DREAMS SINCE 1958

Advice For You, Young Padawans

Letter from an almost alumnus...



SWINGLINE
4B ELECTRICAL

So it's about time that I got the hell out of here. I only phrase it like that because I'm an old fart, and we old farts tend to get bitter and senile near the end. Before I go, I thought I'd enlighten you with a handful of delightful secrets and stories. Follow me through the creatively named stages of university.

Emerging from the vagina that is highschool

Man-oh-man, was I a shithead back then. Coming into frosh week I was more excited than when you realize you already paid last month's rent. This was a place where all my weird habits and interests seemed to be what made me the coolest. I could flex my shit-eating grin and anyone and they'd embrace it and give me five dollars (not literally). Can you believe my frosh group's mascot was a giant pink spaceship with beach-ball fuel tanks? (aka a giant dick) This life I chose seemed like a perfect match for my personality. The best part about all of this though is that I never stopped given'r. If people wanted to try to steal the bigass pink math tie, I was down. If people wanted to road trip to U of T and steal a hardhat as an offering to EDCOM, I was down like the double-down. I did what it took, downed red-bull until I pissed glowing liquid so I could stay up all night and meet new people and do crazy stuff with them. We actually had a plan in the works to use a potato cannon to shoot white paint filled potatoes at the math tie so it looked like it was covered in... you know. I have to give a mention to the orange bastard who encouraged me to do at least some of these crazy ass things... the one the only John Bagby. So what can we learn from all of this? Well, if you want to have fun in University, get a ginger friend. A really gingery one.

Growing some pubes and being beaten by nuns

Being wild and crazy throughout school is all well and good if you go to some

Mickey Mouse University like Brock. UW finally hits you like a ton of feathers (bricks or feathers, it's still a ton) and kicks your ass worse than nuns with big long wooden rulers. You're thinking, man it is so sweet to be free of my parents, I can do whatever I want! I can bring people (one or multiple) home to my bed! I can eat awesome food all the time! I can be hung-over for class! I can poop in public! Then you realize... dammit, eating this shitty food has given me a belly, being hung-over for class is pretty much equivalent to not even going, and pooping in public isn't really all it's cracked up to be: pine needles do not make good toilet paper. So what's the lesson here? Well in truth this place has separated the men from the boys and the women from the girls. You will be humbled by this experience, and that is a good thing.

**"So what's the lesson here?
[...] You will be humbled
by this experience, and
that is a good thing."**

You've finally learned to wear a suit

This stage in the game is when you have had your ass kicked enough that you're running pretty efficiently, but you're not tired yet. I was at this point once. UWAF-Ting, doing decently in school, courting the ladies, pranking the silly non UW engin00bs, and maybe even exercising regularly. You are a bit irritated by school, but you also find it pretty interesting because you've had a few co-op jobs that were actually useful. This part of life is kind of boring to talk about because everything seems to be good! Well, I guess I did get to go to a few conferences where I got a buttload of free booze and expensive shrimp... Anyway, you've also found a lot of the interesting places on campus. The environment cafe is a great place to study in the summer, stay away from the 10th floor men's washrooms in DP, and third-floor DC on the other side of the bridge is a good place to get a blowie at night. It's always good to get acclimatized to your

environment *wink*. So, what's the lesson you say? Cherish it. Keep the energy up. You're a big man/woman on campus now. Do what you have to do to keep your curiosity up about your work. And, stay away from the couches in your fourth year room for obvious reasons.

Giving the finger to kids on the school bus

By this point you've started to get a bit more particular about things. You only listen to classical music and you're always fucking cold. You get up at 5am and go straight to the country kitchen. Then you go to bed at 9pm after watching "murder she wrote" and "antiques roadshow". More realistically, you have become a bit bitter with things you once loved. I certainly did. No fault of the things I'm bitter at, but sometimes you just get fulfillment out of different shit. I realized that there was a lot I was missing out on that was outside of my usual comfort zone. I started doing the most random things, but I was really happy that I did because they gave me a lot of new perspectives. So, what can we learn? I strongly suggest exploring the rest of campus in terms of social activities before you leave. If you don't you'll wish you had. There are so many interesting and amazing people to meet who are extremely talented and creative.

Death and cremation. Pour out a bit of whiskey for me, chug the rest and then violently puke

I didn't really have much to write for this part, because I'm not quite there yet, so instead, a joke.

A young man and his date were parked on a back road some distance from town. They were about to have relations when the girl stopped. "I really should have mentioned this earlier but I'm actually a lady of the evening and I charge \$20 for things." The man reluctantly paid her and they did their thing. After a cigarette, the man just sat in the driver's seat looking out the window. "Why aren't we going anywhere?" asked the girl. "Well, I really should have mentioned this before," said the man. "I'm actually a taxi driver and the fare back to town is \$25."

THE TIN SOLDIER

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Running on Coffee

Caffeine Princess

Sanity Suppliers

Angero Araimo
Jon Martin

Typey Typey

Dutch Rudder
Jonadamarteen
Levi King
Wild Vines

"CMYK That!"

Angero Araimo

Creativity Champion (has more skills than you)

Sarah Lannigan

Victims

Archibald Newsington
Chad Sexington
Kal Sobel
Kevin Liang
Spenny McEwwy
Static Kling
Swingline
Yasser Al Khder

Random Office Bunnies

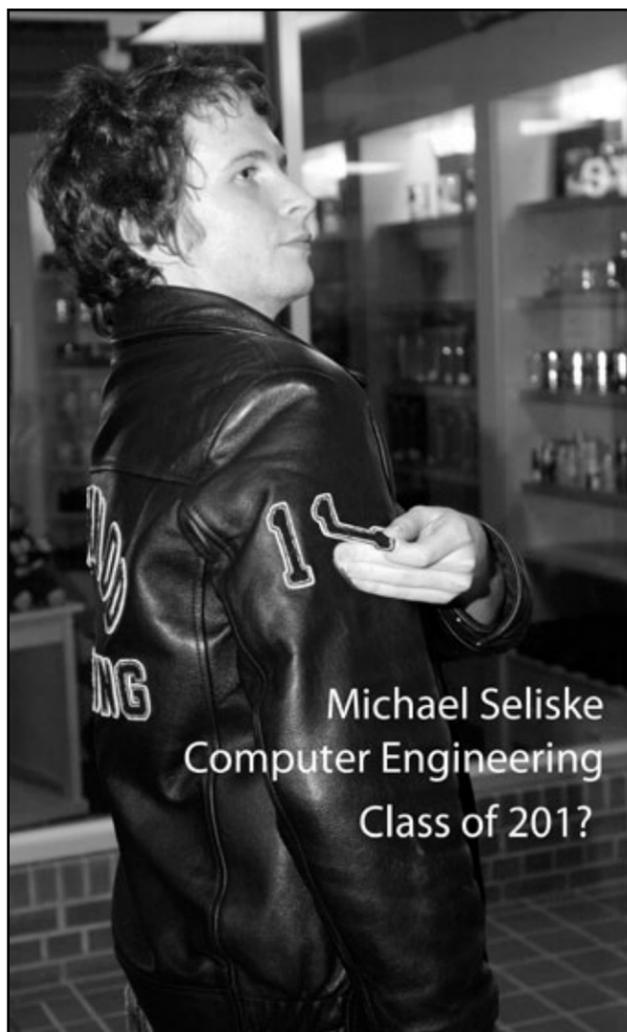
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The Tin Soldier encourages submissions from students, faculty and members of the Non-Existent Action Committee. Submissions should reflect the concerns and intellectual standards of the Society of the Travelling Pants in general. The author's name and phone number should be included, except if they are non-existent. This information may or may not be posted on our website.

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Mail should be addressed to PJ Katie, c/o YTV Canada, P.O.Box 7500, Paris, Ontario, N2L 3W7. We do not currently have a phone, however you may redirect all inquiries to Kickoff's, as we're likely there. We don't have a fax number as no one uses faxes anymore.

Cuukeeng veet zee Svedeesh Cheff Bork!!



JONADAMARTEEN
CHEF INTERN

Chuculete-a Cheep Moofffeens

Prep Teeme-a: Den Meen Cuuk Teeme-a: dwenty Meen Reedy In: twirty Meen

Ingredceents

1 ½ ummmm, tooooo frakshunny, ...
Doooble de rezipee!!!!
tree coops ell-poorpuse-a fluoor
tree teespuuns bekeeng pooder
Uno coop vheete-a sooger
Uno teespuun selt
Doo coop meelk
Doo iggs
1/3 ??? bork!! Bork!! Alll de coop boot-ter... meeceelt

Doo coop semeesveet chuculete-a cheeps

Durecshuns

Ooonee - Heet oofee tu treefify degrees fair-un-heet. Leeghtly greese-a oor leene-a twelllve moofffeen coops. Um gesh dee bork, bork!

Toooo - Ina lerge-a meexing bool, cum-beene-a zee fluoor, bekeeng pooder, sooger und selt. Um de hur de hur de hur. Stur in zee meelk, igg, bootter und chuculete-a cheeps. Um gesh dee bork, bork! Puoor better intu prepered moofffeen coops oor flet buttumed ice-a cream cunes. Um gesh dee bork, bork!

Treee - Beke-a in preheeted oofee fur 15 tu 20 meenootes, unteel a tuuthpeeck inserted intu zee center ooff a moofffeen cumes ooooot cleun.

Foor - Eeeet all de moofffeeeens!!!!

VP Finance, EngSoc Funds Declared Missing



ARCHIBALD NEWSINGTON
TIN SOLDIER

In a shocking piece of recent news, the current Engineering Society VP Finance, Jon Warren, has been officially declared missing. Additionally, it was discovered in the past week that the Engineering Society Corporate and General accounts have been emptied of all available funds. No further information is currently available, and Engineering Society representatives have been unavailable for comment.

Jon Warren was first officially instated as VP Finance in the Winter 2011 term. Since his start, he has been widely accepted as one of the most disruptive and destructive Vice-Presidents in recorded EngSoc history. His initiatives have included the purchase of a "Laser Death Tank", a decision which cost tens of thousands of student-funded dollars and caused significant legal complications during transport. The purchase has since been declared a waste due to its unsustainable energy requirements, and unreasonable military licensing requirements.

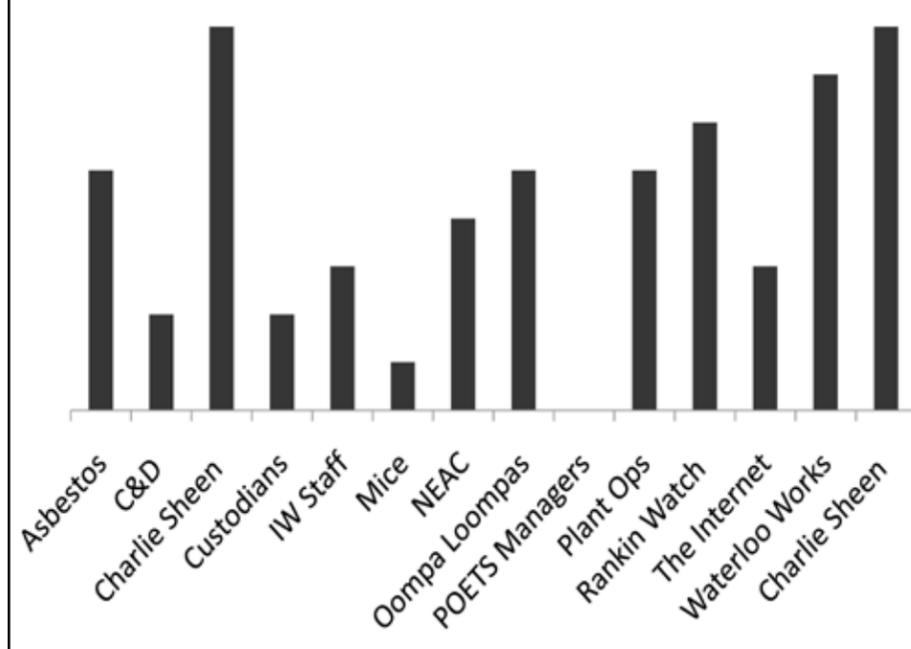
To help resolve this, Jon Warren signed a long-term partnership with Jakubowski Sustainable Energy Industries to provide

"feline-powered energy to the Waterloo Region". The initial proposal was quickly approved by council, but only under the impression that it was comical in nature. Only after official contractual documents were discovered in Jon Warren's mailbox after his disappearance, were his true actions revealed.

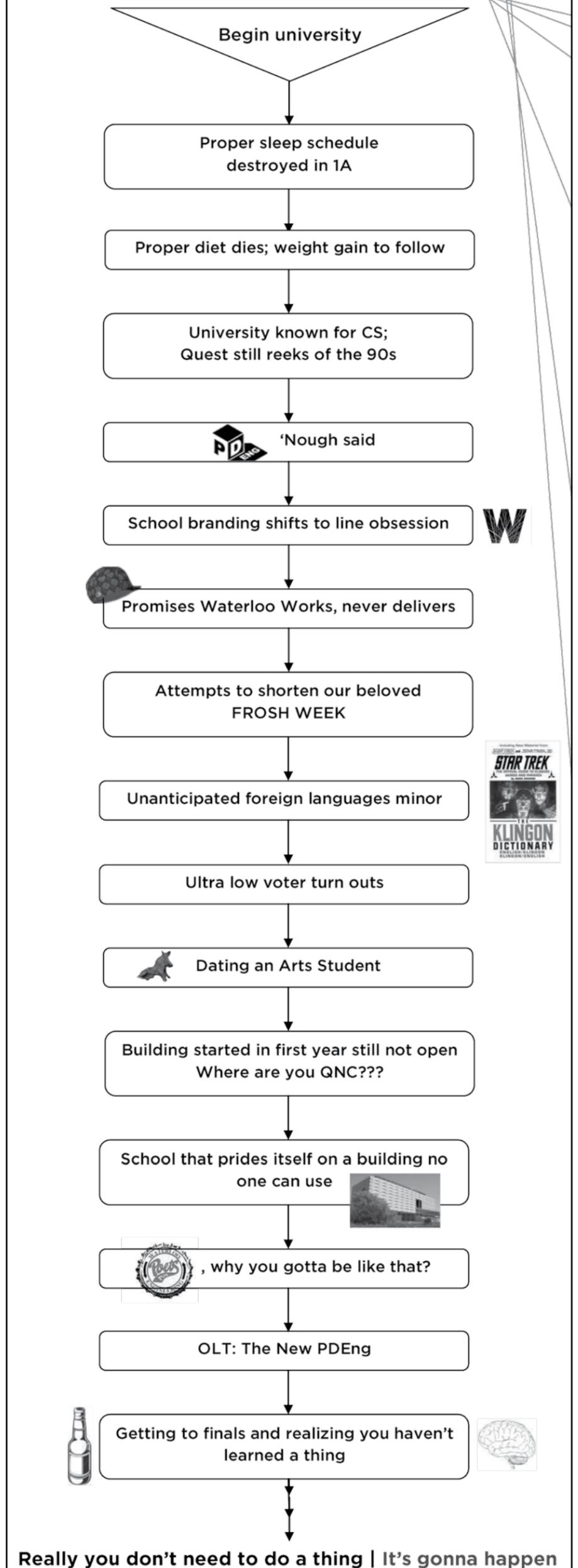
When the Tin Soldier investigated the recently vacated offices of JSEI, documents were found that indicated the energy plan had suffered a catastrophic failure. It would appear that significant complications arose when it was realized that the entire province of Quebec would be required to house the energy project, and that the acquisition of 393 billion cats would cause unreasonable strain on the global production of Fancy Feast.

Jon Warren since received significant criticism for his actions, escalated by his weak defence of "well you guys thought it was a good idea too." He was recently reported to be despondent, but with a hint of mischief. Persons who have worked closely with Jon, but who wish to remain anonymous, have been quoted as saying "well, he has been saying the entire time that he's going to clean out the accounts and flee the country, so it isn't all that surprising that it just happened."

Winter 2011 POETS Bottle Count



WATERLOO | BECOMING A BITTER FOURTH YEAR



The 50 Minute Sleep Cycle



DUTCH RUDDER
3B ERECTRICAL

Many people have heard of the Da Vinci, or polyphasic sleep cycle, where proponents take four 20-30 minute naps per day, rather than a full sleep at night.

This term, I have experimented with the very successful 50 minute sleep cycle. I spend all night working on VP Ed duties and then take 3 to 4 50 minute naps per school day. Luckily, I have professors who kindly oblige in promoting such healthy sleep, including the provision of very comfortable course notes, soothing, monotone voices and poor room acoustics conducive to

sleeping rather than listening to class. Thanks so much to the University of Waterloo in promoting healthy sleep habits and leading me to this revolutionary idea. I will be sure to credit this fine institution with the accolades it deserves in leading me to this new sleep system.



50 minute cycles aided by Engineering professors

Short Exec: Windfall or Conspiracy?



DUTCH RUDDER
3B ERECTRICAL

The engineering society has spoken: the number one requirement to be a B-Soc executive is height (or lack thereof), with incoming exec a cumulative 10 inches shorter than the outgoing team.

Voters opted for a shorter exec—"I just like being able to look down on them", said one anonymous voter.

"All in all, we are just too damn tall," stated outgoing President Scott Rankin. "It's clear the people have spoken-I've been in tears reading the mountains of feedback criticizing my height" added outgoing VP Finance, Jon Warren.

Owen Coutts, shortest of the new exec at 4'11" (see picture), claimed "We have known for years that us short people are superior leaders: now we will finally get a chance to prove it." Rumours of a little conspiracy are unconfirmed, but under on-going investigation.

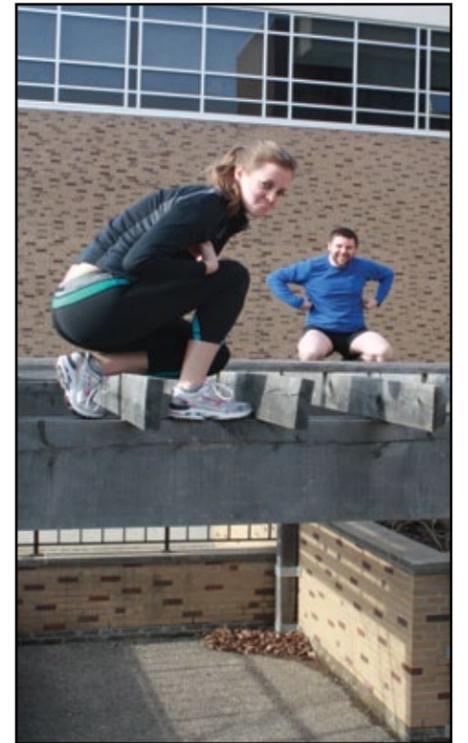


Questions raised about the incoming EngSoc executive due to serious lack of height

Worries Over Goose-Like Behavior Observed in EngSoc Running Club

WILD VINES
13% WINEOLOGY

There's always a certain time of year when the snow finally starts to get the hell out of here and we finally start to see some sunshine and a faint glimmer of hope. Unfortunately, the Canada Goose, Waterloo's most hated native devil-child-animal, often comes beastly-wing-in-hand with this season change. You can almost instantly tell when they lurk back to campus and start honking and pooping pretty much everywhere. Some even more frightening things have been spotted this particular spring however, as some unusual pack-like behavior has gotten into the Running Club. Recent sightings of the group running in V-like formations and certain members starting to perch on campus buildings and form nests in odd locations have lead most to believe that they've started drinking out of the E2 fountain again. Warning to all readers: when they start nesting in the spring they become exceptionally aggressive. Problem is, unlike the fat geese on campus, these guys can run FAST!



Nesting behaviour shown on the POETs patio



Strange flocks of Running Club participants have been spotted around the Waterloo campus

A Final Farewell From Chad Sexington



CHAD SEXINGTON
4.5X MANGINEERING

Good afternoon Sexy Readers, It's under non-ideal conditions that I write to you this last imparting of wisdom, but perhaps nothing is ever ideal and that is the lesson of life. Just when you think it's going swell you pick up a few knocks and stumble one more time. It's been a long time coming this final thought of mine, and though over the years you've been exposed to a lot of lumberjackish wisdom, but most of it has been nonsense (on purpose). So to wrap up my time at the IW, I wanted to say thanks to everyone. Thanks to you, thanks to the idea people, and thanks to editors and other writers who hassle me to get my articles in and anyone else I forgot.

Last term I wrote a piece to A-soc explaining that someone needs to fill this space. My larger-than-life friend Will Zochodne is doing admirably so far, but there is plenty of room at the bottom so don't use that as an excuse not to write 500 words of nonsense every two weeks. It's pretty easy so get crackin'.

You're probably expecting some dis-

tilled wisdom of my time at Waterloo, and I wish I could supply some, but for the most part, those little tidbits don't do much for people. I find that no matter how many times you reiterate a phrase, people just need to learn things by experience and it only sticks after a few rounds. And so, if I had to try to offer anything, something that you would

take away from all my back page shennigans, it's that good things don't come to those who wait. Good things come to those who tell the waiting game to shove it and go get satisfaction. I'm going to get mine, will you get yours? Nothing is ever impossible.

To close, I know you hear this all the time (and it's probably not going to stick) but don't forget where you came from. Life on the bottom is hard, and you shouldn't ever forget it, even when you're a trillionaire and living on Mars. Go forth into the world my sexy readership, take what is rightfully yours and render unto others that which is their due. Be responsible, be honorable, and keep your promises, even if they cost you more than you bargained for. It's all your state of mind.

Until we meet again,
Stay Sexy

For now and always,
Stay Sexy



Is it Goldmember?



Is it a SeanO Bear?



No! Its Chad Sexington!

Big Things with Will Zochodne Kal Sobel & Yasser Al-Khder

Engineeringus Maximus Systemus (or incredibly, towering engineering marvel)



**YASSER AL-KHDER
KAL SOBEL
2A TRONOMETRICS**

Total Weight: 230lbs
Maximum Ground Speed: 6km/hr
Maximum Altitude: 15ft
Wingspan: 5ft

Welcome to another exciting edition of Big Things with Will Zochodne. Will has chosen to take a well-deserved break of studying big things to stare at smaller things for a while, and allowed two not so big people: Kal Sobel and Yasser Al-Khder, to take over his column. While we were researching our column, we discovered that by observing such magnificently big things, one



Owen rejoices after finding a new hiding spot as a fugitive

is struck with the awesome power of engineering. How could something so glorious be created by man? The answer, my dear readers, lies in science. Today, we take a look at another wonder of engineering: Engineeringus Maximus Systemus, or the rare Giant Systems Engineer.

Born Owen Jesus Coutts, this engineering marvel came into the world in a small hospital in the far off land of Seattle already a champion, having won the world record for world's tallest newborn at four foot, seven and a half inches. According to legend, his middle name came about because his father said that he will use whatever his wife's first words were when she saw her newborn son

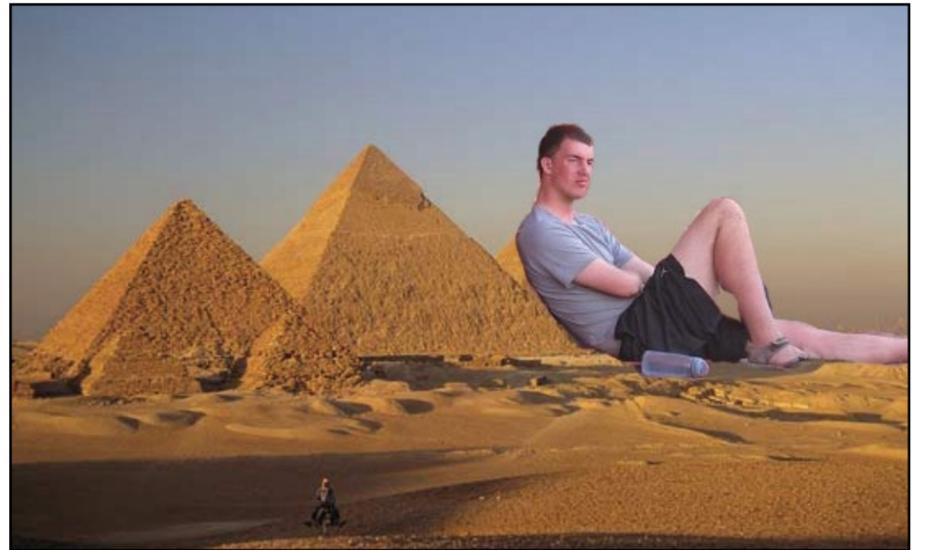
as his middle name. This was, however, only the beginning of this engineering legend's winning streak.

In grade school, Owen earned himself his next title, setting the world record for most pencils broken in 24 hours. During one interview, he was quoted saying "I don't know HOW I did it. Maybe they should just start making pencils to accommodate people like me? I mean seriously, how am I supposed to hold something that small?!" before his desk shattered out from underneath him, unable to hold his massive size. This ill-fated interview earned him the nickname "Owen the desk-troyer" which haunts him to this very day.

Owen began his illustrious career as a professional tree impersonator early in his high school career. "It happened by accident, really." He is quoted as saying, "one day, I had just finished eating an entire burger shop and I stopped in a nearby park to rest. I was staring off into space for a moment (which I can do, as my head is nearly above the clouds), when I felt something wet on my leg. I looked down to see a dog, relieving himself on my pant leg. Boy, the look on that dog's face when I nudged him with my foot, hoooo boy, that's not something you forget in your life." He spent most of his adolescent years in obscurity, taking on small parts in movies where there wasn't enough natural trees on set, but his big break came in 1997 when he was cast alongside Leonardo DiCaprio in the movie "Titanic" to play the role of both the Titanic and the iceberg. About his roles, Owen says: "It was a really tough time, playing both the ship AND the iceberg. I had to keep laying down to be the boat, and then standing up again to be the iceberg....man,



Owen helps shape the CN tower as part of his co-op position in 1A



Owen relaxes after a hard day of working as an oil rig platform

it was exhausting. Do you have any idea how long it takes me to stand up to my full height? A DAY. A full DAY. "

Unfortunately, this victory was very short lived, as two years later Owen would find himself on the run from the law under charges of criminal negligence causing bodily harm, when he accidentally tripped during a night of drinking and partying and

knocked over the Sears tower. Now a fugitive, Owen spent several years hiding from the law by replacing the Washington monument with himself until he was finally discovered by a night security guard when he sneezed, clearing the entire reflecting pool. Owen fled into Canada, assuming the new identity Shorty Reallytall and taking a day job working on an offshore oil rig platform, where he was required to spin in a circle really fast until

he struck oil.

Owen gained interest in the field of engineering during his next job, after he was let go by the oil company for spinning too fast and creating a hurricane (aptly named Hurricane Owen), when he took employment with the Canadian Space Agency. There, his job was to throw space shuttles into low orbit, and to assist with docking with the space station by gently placing the shuttles into the dock. "I kept seeing the various Engineerings in the Shuttles, and I would always think to myself: 'What if I could do Engineerings too?'" He applied to several schools of Engineering, but ended up taking a position at Waterloo as it was the only university with ceilings tall enough to accommodate him.

Owen remains at the University of Waterloo to this day. As a fun fact about Owen's career at UW, the recent "renovations" taking place in the CPH foyer to remove the asbestos were actually to repair the damage caused by Owen reenacting the song "Dynamite" by Taio Cruz. Upon "putting his hands up in the air sometimes", Owen completely destroyed the ceiling and lighting of CPH. Once he realized what he had done, he ran into POETS to report the damage, only he literally RAN INTO POETS. POETS was completely destroyed. Out of guilt for his destruction, Owen is gifting a sink to POETS lounge.

Next week, we study another engineering marvel: The world's largest divide by zero error. Could it be in Math 115? Find out next time, on Big Things With Will Zochodne!

Bieber My School - UW's Stratford Campus Renamed



**WILD VINES
13% VINEOLOGY**

Waterloo has a classic and easy to detect tradition of allotting their buildings generic names until an alumni of that faculty contributes a significant amount of money and is then rewarded with having a 40 year old building named after that. It's a mildly popular tactic that is allowing for the ease of expansion of campus by simply numbering the new buildings as they pop up on the outside of Ring Road. Your classes in the fall will be located in Engineering 16 by the way, the monorail comes every 10 minutes.

With the opening of a new satellite campus in Stratford, Ontario; the administration has decided to take a completely new approach with the design and naming system of the entire campus. Teen pop sensation Justin Bieber hails originally from Stratford, and he has been recruited in the new rebrand-

ing and recruitment campaign for the satellite campus to help change the 'nerdy' and 'uncool' image that is often associated with the University amongst

the younger demographic.

The Stratford campus is now being renamed The Bieber School for Little Boys and it will mainly focus on per-



The "Bieber School for Little Boys" will be the new name of the UW Stratford campus.

forming arts and the formation of boy bands that will release their music under Waterloo's new record production name, Laser Records. Waterloo hopes to gain popularity amongst the younger, screaming pre-teen demographics as well as generate a metric crap-ton of cash. They have not announced any plans to utilize this money to help reduce tuition, and there are rumors of \$1,000 Bieber-fees being attached to all student's tuition to assist in the process of preventing the pre-teen sensation from going through puberty and losing all aspects of his marketability.

The administration also has plans to completely renovate the interior of the building so as to remove all sharp corners and edges as well as baby-proof all doors and electrical sockets. The Tin Soldier asked for a tour of the facility but were turned down as they could not find steel toes or a hard hat small enough for Bieber to attend as well. Applications for enrolment will be included in each CD case of Bieber's next album, reported to release this summer.

UW Opens Satellite Campus in North Korea



LEVI KING
3B DICTATORSHIP

After the success of the Dubai satellite campus, the University of Waterloo has opened a new satellite campus in Pyongyang, the capital city of North Korea. While this seems like a strange move, the University of Waterloo's public relations department explains that it is the obvious move for the unconventional and innovative university.

"The University of Waterloo is well known internationally. When we started the satellite campus in Dubai, we wanted to bring the University of Waterloo experience to more international students who can't necessarily come to Canada for school," said Albert Behringer, head coordinator of the new University of Waterloo campus.

With the North Korean campus now well into its third month of operation, administrators are already calling it a success. Even with the recent St Patrick's Day celebrations causing some rowdiness back at the home campus in Waterloo, administrators at the North Korean campus reported that students were well behaved and were very good at following orders.

North Korean government officials were very supportive of the idea of the new sat-

ellite campus right from the start and were especially excited when they heard that the new Nuclear Engineering program would be piloted at this campus.

Unfortunately, students will be unable to leave North Korea and will not be able to join their peers from the Dubai and Waterloo based campuses for their third and fourth years of study. The system currently in place with the Dubai campus requires students to complete their last two years of study at the main campus in Waterloo and the students receive an accredited Canadian engineering degree. Initially the Canadian Engineering Accreditation Board (CEAB) was uneasy about the prospects of giving a Canadian accreditation to the Nuclear Engineering program as the students would be completing all four years in North Korea. This decision was changed, however, after the CEAB visited the new campus as part of the accreditation process. One of the CEAB members reportedly enjoyed the visit so much that he never left North Korea.

In accordance with North Korean laws, a 60" chrome statue of Kim Jong-il has been adopted as the mascot of the North Korean campus' engineering society.

Both the University of Waterloo and the North Korean government look forward to seeing the success of this new campus and are eager to see what the Nuclear Engineering program can produce.

Co-op Tips: How to Tick Off Your Boss



DUTCH RUDDER
3B ERECTICAL

Everyone knows that you are only at co-op for four months and clearly your development on co-op has no influence whatsoever on your success later in life. If you really want to impress interviewers post graduation, you'll want to have lots of stories to tell about how much your previous bosses hate you and therefore you are really desperate for the job. Here are some stellar tips on how to make sure your boss hates you, ensuring great stories for years to come.

Talk as much as possible about religion and politics. Invite Jehovah's Witness to your office to give presentations on the merits of your organization. Make sure everyone in your office prioritizes spiritual salvation over temporal needs with large posters of various deities and prophets. Alternatively, go on tirades about how silly religion is and how stupid all adherents must be for believing it. This is a great way to get everyone in the office sharing their views in a peaceful manner. Another great topic is politics-be sure to mention your favourite politicians, bring banners and campaign signs to the office and email your co-workers articles advocating certain viewpoints.

Make inappropriate jokes in the lunch room. A sure fire way to make everybody uncomfortable. All publicity is good publicity, right and nothing screams dedication like an equity complaint to HR.

Show your support for social networks. Make sure you add all your co-workers to Facebook and access at work whenever possible. This way, everyone will understand if you show up a little groggy, as they can see pictures of you drinking beer out of a shoe the night before. Twitter, youtube and other sites really show your commitment to your company's social presence.

Steal material directly from your competitors: this is called "best practices". See a great ad or innovative idea from a competitor? Ensure your company remains competitive by taking their materials and rehashing them as your own. Taking code or other proprietary information from another company (perhaps through a co-op friend) is a great way to build trust and show your loyalty.

Go around your boss to criticize him to his superior. His supervisor will appreciate your honesty and be sure to reward you. Your boss will be especially appreciative, as everyone loves feedback when it is not given directly to them.

If you don't like your co-workers clothes, hair, weight, etc., make sure you let them know. Nothing is more helpful than direct, forceful commentary on personal attributes.

Show up fashionably late and then make a big deal about it. You want everyone to know how important and special you are and there is no better way to do so than talking about what a hangover you have this morning.

Play your music really loudly, without speakers. It's safe to assume that everyone has the same music tastes as you and would be delighted to hear your music.

Complain all the time. Everyone wants to know how unfair your job is and how you could do a far better job than those around you.

Dangling *Pointers;

Dear Infectiously Cute,

I see you riding the 12 with me every morning. I always want to say hi, but I'm not quite awake yet. Public transit usually makes me a bit of a germophobe, but I wouldn't mind catching a bit of what you're selling. You can cough on me any time, or maybe we can swap saliva another way?

--Sick4U

Dearest SkaterGurl,

Too bad we were standing on opposite sides of the room at Colour Me Educated. Your skinny jeans and cute skater shoes told me enough to want to know you. By your gorgeous face I can tell that you're the quiet type, but that's okay, I'm not that big a talker either. Maybe we could have hit it off if it was you and I confined to that garbage bin. I'd let you educate me however you'd like.

--Needs2Btaught

Let's Be Creative! Contest Results

Congratulations to Sarah Lannigan for winning our creativity contest. Sharks, giraffes, bunnies in hats and Tool stealing geese for the win! Thank you to everyone who submitted their creations, they were all wonderful!



Gaming of the Future: Admitting Defeat



JON MARTIN
OBI JON1138

Sony has finally announced their ultimate plan for defeating hackers on the PS3 system, or at least the current hack. This process will involve the courts, police, and may run Sony into the ground, but it has been deemed a necessary risk to put a stop to the cheating running rampant through the PS3 install base.

First, a bit of background on the hack and the recent developments. The newest PS3 hack targets the root code of the system, hardwired into the CPU of the system. Using the hack does not require any physical modification to the system, it can be loaded onto a flash drive and completely circumvent the internal security systems of the console. Altering the root code allows hackers to install any program onto the system, to play illegal copies of games, and to alter online matches to their favour. People following the developing story, myself included, had generally come to the conclusion that Sony was caught in an impossible situation. The vulnerability to the hack lies in the fact that the root code for the PS3 is hardwired into the CPU, as well as being identical in every single system ever produced. What this means is that Sony would have to recall every single console ever sold and replace the CPU, which many thought to be impossible. Apparently not!

Sony has announced a new mandatory recall for all PS3 consoles, effective immediately, at no cost to the consumers. Similar to the way Microsoft has handled the RROD fiasco, Sony will pay for the shipping costs to send the system to their manufacturing plant and back to owners, at an estimated cost of \$100 (Canada Post, using Slim PS3 specs, shipped from my house to California) for both ways. The actual cost of the new CPU is unknown at present, but let's guess at \$50, approximately

20% of the current estimated production cost of a new PS3 (\$240). So that is \$150 for each PS3 sold, times the current estimated number of systems sold, 47.9 million. That works out to about 718 million dollars, a sizable dent in Sony's estimated profits for this fiscal year, which were 1.7 billion in case you were wondering. Of course, that is the estimated company-wide profits but what about the Networked Products & Services division, which includes their gaming division? Well, the division's operating numbers last fiscal year showed a loss of \$895 million, which was a pretty good improvement over the previous year's loss of \$941 million. So if the trend were to continue, leading to a loss of only \$850 million, then the total loss once you include the new recall program would only be \$1.569 billion. Applied to the estimated profits for the company, that would reduce them to about \$1 billion; I wonder what impact that will have on their stock?

I'm guessing that some people will have found the flaw in Sony's logic by now, mainly that the people who have hacked their systems and are now enjoying their pirated games, don't want to have their PS3 fixed. People have

illegally hacked their system are not going to voluntarily give them back to Sony to replace, removing their illegal super powers. To use the RROD example again, people kind of wanted to have their systems working again, so they jumped on board the replacement program – personally I had a system replaced two times before they finally got to a CPU design that didn't catch on fire.

So what is Sony going to do? What would any company do? Sue their consumers and send the police out on them of course. Sony has already successfully subpoenaed George Hotz's PayPal records to track if he made any money off of the hack, now they are taking that worldwide, to every distributor. Sony will be forcing all retailers to turn over any records they have remaining about purchasers of the console – their credit card information, maybe their extended warranty, their information on the company directory – anything to get their home address. Cross-referencing with the list of people who have already sent in their PS3s will allow Sony to compile a list of everyone who refused to send in their system. That is where the police come in, privately funded SWAT teams,

sanctioned by local police departments, will be swooping down on unsuspecting non-conformists. Snatch and grab tactics will be the main method for obtaining the illegal PS3 systems, with liberal use of pepper spray, tear gas, and random bodily harm.

So that is the plan for Sony, to restore order within their empire, and squash the rebellion among their subjects. Good luck!

On the Xbox front, Microsoft has publically declared the Kinect to be a commercial failure. Despite their best attempts to market the peripheral both for gaming as well as homebrew developers the peripheral has not sold enough units to recoup the development and manufacturing costs. Microsoft will be mothballing the Software Development Kit (SDK) that was under development. The SDK would have allowed anyone to connect the peripheral to a PC and develop gaming or non-gaming applications using the full 3D and motion tracking capabilities of the Kinect.

As for Nintendo, they have decided to cut their ties to some longstanding IPs that have defined their systems for many years. Deciding to be innovative and risk taking, Nintendo is no longer going to produce any games focused around the Mario Bros. and Pokemon franchises. Despite masterpieces like the Super Mario Bros. movie, the gaming giant has decided to focus on creating new IPs instead of relying on their standard characters. We can only guess what new games will be developed now that Nintendo is abandoning the pokemon series, after hits like Red, Blue, Yellow, Gold, Silver, Crystal, Ruby, Sapphire, FireRed, LeafGreen, Emerald, Diamond, Pearl, Platinum, HeartGold, SoulSilver, Black, and White, building on each other for a total of 649 pokemon.

So that is it for this issue of the Tin Soldier, remember to guard your PS3 and start building up your immunity to pepper spray. Keep on gaming!



Roving deathsquads prepare to defend the Sony empire

OMG UW Releases Private Data

Site Moderators Reveal Identities of all Contributors, Mass Wave of Panic Ensues

SPENNY MCEWWY
FLAME WAR CORRESPONDENT

In an unprecedented move, the moderators of the popular site OMGUW.com have removed the ability to post anonymously on its site and have utilized IP backtracking to identify all anonymous contributors to the site since Winter 2009. This action has prompted outrage from a large percentage of the student population on campus, due to the loss of the ability to anonymously criticize and degrade the many aspects of university life and the students who are a part of it.

The primary function of the website is to allow students to post short, microblog-style posts that bring attention to everyday intricacies that students at Waterloo face. The post is prefixed with the phrase "OMG:", followed by a short observation, statement, or question that is intended to resonate with the student body on campus. Anyone has the ability to comment on each post, to further explore the topic that has been presented. Comments range anywhere from supporting the initial state-

ment, providing a counter argument to a post, completely disregarding the original post and launching an unprovoked personal attack on <insert any university group, service, student government, or individual>, or contributing witty banter such as "OMGWTF stfu u r such a n00bb!!!"

The newly released information added has added an entirely new layer to the site, and the moderators are excited about the new changes. "OMG UW is continuing to push the limit on microblogging," says M, one of the site's moderators. "Now, instead of just reacting to what has been posted, there's a whole new dimension added by knowing who posted it!"

Over seven Facebook groups have been formed to protest the release of this private information. "Where am I supposed to vent my frustrations and gripes now?" says Bradley, an undergraduate in legal studies. "I have so much anger and witty banter that the campus needs to know about. How else am I going to let the Federation of Students know that I don't think they are doing a good job? Or that the Iron Warrior is a terrible publication?"

When asked why he doesn't go and actually speak with the student leaders and newspaper columnists and make his opinion known, he responded with "You can do that?!"

Frantic students have attempted to plead with the moderators to remove their names from posts. One student, who commented anonymously through a fake Twitter account with the hashtag #OMGgate, voiced outrage. "A lot of that information was secret! I don't want people to know that I personally think that the current Faculty Orientation Committee members are losers. Some of those people think I'm their friend! I just wanted students to be aware of their douchebaggery!" However, searching the posts for 'FOC' has identified the poster as Justin, a third year kinesiology student.

However, there are a few students that are applauding the changes. Samantha, a third year biology student, was elated at the information that was divulged. "Last month, someone posted that they totally saw me flirting with Josh, when I totally wasn't. I totally thought that Melissa post-

ed that to OMG UW, so I totally got in a fight with her. The site totally just revealed that it was Suzanne, not Melissa! Oh my God! What a little skank! I'm so totally not her Facebook friend anymore."

There have been many surprising individuals who have posted to the site. David Johnston, the former University of Waterloo President and current Governor-General of Canada, has been a frequent contributor. He has posted in the past about how much he 'hates the fucking geese on campus', and rumor is that he is working with the Prime Minister's Office to remove the word 'Canadian' from 'Canadian Geese'. The Canadian Government could not be reached for comment, but efforts are underway to contact the Harper Government for an official statement.

The moderators have hinted at future improvements, including the ability to impersonate other people while posting, to provide phone numbers in the "Missed Connections" section, and to identify the individuals quoted in the "Overheard at UW" section.

Judging a Book by its Cover

Jersey Shore Cast Releases First Books



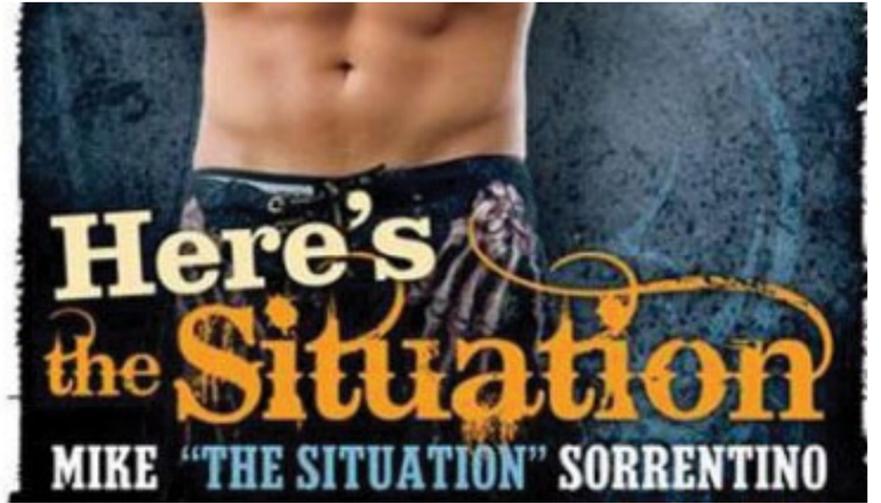
As soon as Jersey Shore aired, I knew it was only a matter of time until they made the seamless transition into the literary world as well. Already reports of 4 of the Jersey Shore cast members have either already released books or are planning to release them soon. Snooki and Jenni already have books on the shelves and Ronnie's is scheduled to release soon, but Mike 'The Situation' Sorrentino's self-help piece Here's the Situation appears to be a definite page-turner. I personally have not read, nor do I have the time to attempt to sift through the 133 pages of serious knowledge-dropping that the Sitche has to offer, but based on my serious knowledge of the Jersey Shore, I have this formal review to offer.

The subtitle of the book, 'A guide to creeping on chicks, avoiding grenades, and getting in your GTL on the Jersey Shore' confirms the fact this thing is a goldmine of knowledge. In fact, I'm recommending that this book be integrated into first year classes so as to teach the

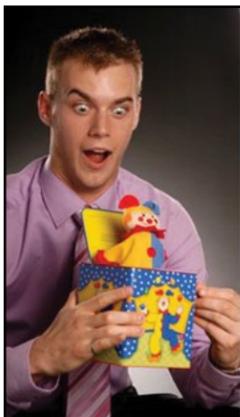
importance of gym, tanning and laundry to all frosh, as well as the proper way in which to avoid grenades at the club, a life threatening situation that should always be avoided.

For those of us that have already achieved sufficient guido or guitdette status, you can still put this down as some easy reading to brush up on the fundamental facts of life. There is even a bi-winning acceptance speech that you can steal from the Sitche that will make all the ladies cry. "Whenever you attempt to do something extraordinary in your life, whenever you put yourself out there in an attempt to succeed and in turn risk falling flat on your face, there are going to be people on the sidelines second-guessing you and making fun of you as a mechanism to disguise their own fear and envy for the life they're watching you achieve. Those people are called haters. Attention, haters: It's been a lot longer than fifteen minutes." Preach!

Overall, regardless of what stage of your life you might be at or what you're looking for, I definitely feel you'll be able to find something in this book that will be of substance and significant guidance to you, the Situation is definitely the next hair-gelling, self-tanning prophet of our time. Final rating: 4 fist pumps out of 5.



No one wants to look at his face anyway.



The POETS Managers are saddened to announce that EOT HAS BEEN CANCELLED*.

We're sorry.
We don't mean to make you sad!

*But really, we're just kidding...
April Fool's EOT, Friday, April 1st
8pm to 10pm, Location TBD






HOW TO WIN A FDES FOURSQUARE CONTEST

1. Create a script to check in at the contest location. You can use the code below!


```
<?php
// insert random includes

$request = new Requests('my@emailaddress.com', $password);

// randomize latitude/longitude so there isn't a real pattern
$lat = 43.4724 + rand(10,99)/1000000;
$long = -80.5449 - rand(10,00)/1000000;

$response = $request->post('http://api.foursquare.com/v1/checkin.json',
    array('vid' => 12025561, 'geolat' => $lat, 'geolong' => $long));
?>
```
2. Run the script daily. If you have a server, just set up a cron job for this!
3. **Winning!**



1st Place Prize: iPad
2nd Place Prize: Value From Your FedS Fees
3rd Place Prize: Moral Ambiguity

THE TIN TRIBUNAL
 It's Sunday, and I'm tired and I just want to do my homework and study for finals so I can get the hell out of here

"How would you spend \$2.7 million of student money?"



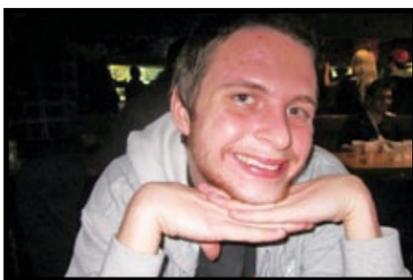
"Ginormous breast implants"
Wild Vines, 13% Wineology



"Acquire a time-turner"
Caffeine Princess, 3B Hyperlogical



"Buy my classmates social lives"
Future IW Victim..., 1B Jobless



"Buy a degree"
Mikhail Seliskov, 8L Creep-ology



"Turn the IW office into a Starbucks since Enviro screwed that one up..."
Angero Araimo, 3B Erectrical



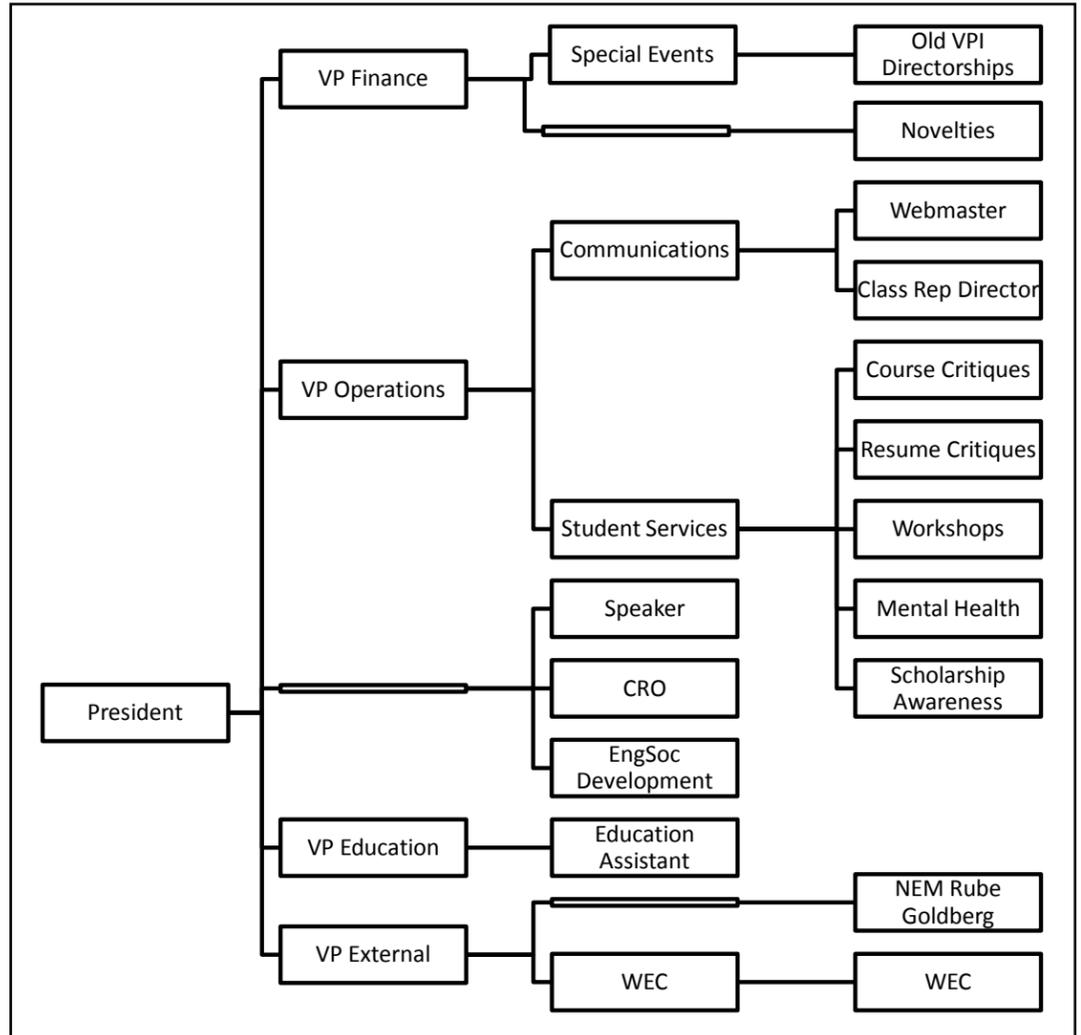
"Buy a startup company and shut it down - just to see the look on their faces"
Fall 2011 IW Victim, 3A Concrete N' Steel

Engineering Society Executive Restructuring

Although Commissioner Applications have now closed for the Fall 2011 term, here is a little additional information regarding the new structure that will be tested out in the next B-Society Term.

There are 8 proposed Commissioner positions. The Incoming EngSoc Executive will review the submitted applications for these positions as well as holding interviews. The selected Commissioners will then be ratified at the next EngSoc meeting, ensuring accountability and allowing them to be mandated by council.

Directorship Applications opened yesterday and will be open until April 28th. Further detail about all of these positions as well as the Directorship Application Form can be found on the Engineering Society website, at engsoc.uwaterloo.ca.



So Long, and Thanks for All The Monies



JON WARREN
VP FINANCE

This term has really flown by. It boggles my mind that we only have a week or two of class left, and that I'm so close to never being allowed back at UW ever again (aka graduating). I don't really have too much to report at this point in time, but I will summarize what I covered at the last Eng-

Soc meeting.

Capital Expenditures: we have bought, or will buy (from approval by exec and thumbs up from council) the following: a new TSN camera, wireless microphones for meetings, a digital piano, walkie-talkies, a netbook, and a canopy for EngSoc and student teams. Obviously there are other small things, but those are the major ones that I think are important for people to be aware of.

Goals: As much as I've tried to stay on top of everything, this term has turned out

to be a bit more demanding than I initially anticipated. As a result, I haven't spent the time working on Novelties that I said I would (in terms of ordering new products, refreshing inventory, and advertising). I really do apologize for this, and I am going to devote a fair chunk of time in April to making sure I get these initiatives underway. I hope that I've done a decent enough job with everything else, and at the very least have used humour to distract everyone from anything less.

Finally, I'd like to give a big thanks to

my Novelties directors this term. They've had to deal with the shambles of Novelties being in the back of the EngSoc office, the slow sales, and the self-direction they've been required to take on. If it weren't for them, we wouldn't have had any Novelties at all. I truly appreciate the work they've done, and that they've stuck with it. Of course, my final thanks go to Mina Labib for helping cover for me and provide advice where needed.

Take care everyone, and good luck on your finals! It has been a blast.

Thank You EngSoc Directors and Event Goers



PETER KELLY
VP INTERNAL

Well this is it everyone, my last IW article as an EngSoc executive. It's been one heck of a ride and despite sometimes taking on more than I can handle, I wouldn't change it for anything. I don't really have too much to discuss as per EngSoc related things, however you should all join the EngSoc Facebook group. Simply search "UW Engineering Society" and join. You can like our page which is also

"UW Engineering Society".

So, since I only have a few more weeks left at this school, I thought that I would impart some wisdom that I have acquired over the years:

1) Get involved in something! It doesn't matter what it is but being a part of something beyond going to class will really help round you out as an individual and make you a better engineer in the long run.

2) Get sleep! There comes a point when studying for an extra hour will be less effective than just going to bed. Don't undervalue the importance of a good night's sleep.

3) Exercise! I will be the first to

admit that I would much rather play some Call of Duty, rather than go for a run. But when you exercise you can clear your mind, reduce stress and feel better overall.

4) Make friends! Friends are a huge asset, they can help you with assignments, with studying and most importantly, you can hang out with them. Countless times in my 5 years here, a friend has bailed me out incredibly whether it was reminding me of a due date or helping me with a problem. Don't sit in your room alone.

5) Lastly, HAVE FUN! Enjoy your time here, school in itself is fine and dandy, but going and doing some-

thing completely random with friends is better. Don't let school limit your ability to have a good time. But know the balance, get your work done, and figure out what grade level you're happy with.

Maybe you agree with me, maybe you don't, but this is what I have found has worked for me, and I know it has worked for others. So, thanks Waterloo for all the good times over the last 5 years, it's been a blast.

Take care,
Peter Kelly
VP Internal

Upcoming Events Calendar

Wednesday March 23	Thursday March 24	Friday March 25	Saturday March 26	Sunday March 27	Monday March 28	Tuesday March 29	Check out up-to-the-day event postings on the EngSoc website at engsoc.uwaterloo.ca 
Academic Rep Meeting 5:30PM DWE 2536	Running Club 5PM POETS Patio EngPlay 7PM AL 113	Jass Band Chairty Gig 6PM SCH GradComm Crawl	Bus Push 10AM from Campus EngPlay 2PM and 7PM AL 113	Eng Yoga 3PM	Women and Engineering Forum 5:30PM RCH 112	Running Club 5PM POETS Patio	
Wednesday March 30	Thursday March 31	Friday April 1	Saturday April 2	Sunday April 3	Monday April 4	Tuesday April 5	
EngSoc Meeting 5:30PM CPH 3607	Running Club 5PM POETS Patio	EOT Party 8PM Location TBD			Last day of lectures		

Messages From Your Incoming EngSoc Executive

ALESSIA DANELON INCOMING PRESIDENT

Hey everyone! My name is Alessia Danelon and I am your incoming President for the Engineering Society B. As you may have read in my platform, I have a lot of new ideas for EngSoc, and I am really excited for the upcoming term, however, before all the business begins, I'd like to tell you all a bit about myself.

I grew up in a very Italian suburb of the GTA called Woodbridge, feel free to tease me about it. I am the oldest of 3 girls, and trust me, you're not the first one to empathize for my father. I enjoy doing a variety of things in my spare time, but my main interests include music and film. I love curling up on the couch with a good movie and a latte; it's probably one of my favourite things to do.

Enough about me though, what I'd re-

YASSER AL-KHDER INCOMING VP EXTERNAL

Hello Everyone,

I hope everyone's enjoying these last few weeks of school before we have to start cramming for finals.

So I'm going to be your VP-External for the next 16 months, and I have to say I can't wait to start working for you (and with a lot of you)!

ALEXANDRA COLLINS INCOMING VP FINANCE

Hello aspiring Engineers! This is my first IW entry as your next VP Finance so I will use this submission to introduce myself. I have a love/hate relationship with physics, broke someone's collarbone, and learned about organization restructuring in MSCI 311. Surprisingly, these random facts have and will influence my time in Waterloo and the Engineering Society.

In my (second) final year of high school I lost an argument with my parents and had to take physics. Thinking before of applying only to business programs, I was now magically qualified to apply to engineering. Now, I am just about to finish my 3A term in Management Engineering, and despite struggling through physics I couldn't have made a better choice.

Growing up in Toronto, I lived hockey. I don't know if it is believable or not but I was the tough one on the ice. Being on the ice every day of the week meant I

ally like to do is get to know all of you. I am a big fan of feedback, so if you ever have ideas or suggestions for EngSoc, feel free to email them to bsoc_prez@engmail.uwaterloo.ca, or stop by the EngSoc office and have a chat. I'm always excited to see new faces and meet new people, so don't be shy to come up and talk to me about anything at all, even if you've never met me before! One quick note though, I'm not the best with names, so you'll have to give me a fun fact that goes along with your name to help me remember it when you come to say hello!

Overall, I'm looking forward to a great term, with a great executive team, and of course, great EngSoc members. This society exists because of and for you, don't ever forget that, and be sure to use it to improve your experience in Waterloo Engineering.

So a little bit about me; For the most part of my life, I was raised in Dubai, where everything is bigger (You thought that was Texas, but who has the tallest tower in the world? Exactly.), and people ski indoors. I'm currently in 2A Mechatronics Engineering and loving it. I'm friendly, kind, charming, charismatic, witty, and an all around good guy; however, I may have a biased viewpoint...

was always busy. Coming to university, I was suddenly left with a lot more time to do school work - naturally it didn't get done. After the stress of first year subsided I knew I had to do something to keep up the busy lifestyle I was use to. This is when I started to get involved in the Engineering Society and my marks have improved drastically.

As you may have heard, there will be some structural changes within the Engineering Society that will expand my portfolio. Rest assured, I am ready for this challenge and looking forward to it. I will be working very closely with Andrew Fisher during the trial period to gain his input on the directorship that would previously be managed by the VP Internal.

Lastly, I encourage everyone to consider applying for a directorship or commissioner position. If you have any questions about the positions visit engsoc.uwaterloo.ca or stop by the Orifice where there is bound to be someone who can talk to you about each position.

Good luck on exams and have a great summer!

ANDREW FISHER INCOMING VP INTERNAL

Hello engineering et. al.!

I hope everyone enjoyed the warm weather this past week and hopefully it's given you some extra energy to power through those final projects or assignments. With the term winding down and exams starting to peer over the horizon, I would like to take some time to introduce myself before many of you disappear into the dungeons and then off to the lands of co-op. So, with no further ado, Andrew Fisher is my name; your VP Internal [Operations] is my game. I am from the small town of Dorchester, ON, 15 minutes east of London. Growing up, I developed a fond love of Lego and a desire to understand why buildings were designed the way they were. This explains why I am currently in my 3A term of Civil Engineering.

Outside my involvement with the En-

OWEN COUTTS INCOMING VP EDUCATION

Hi, my name is Owen Coutts. Yup, I'm that tall guy you see hang around but you can refer to me as VP Education or just Owen. I know I'm a tall guy but that doesn't mean you have to be intimidated by me. Feel free to come to me with any questions or concerns you have at any time. Or you can email me at bsoc.vped@gmail.com.

gineering Society, I am (or was) an active long distance runner. I also enjoy some hockey now and then and love (and I mean LOVE) to play golf. As soon as April hits, I will be out there full swing! I enjoy almost any type of music and have no real desire to play video games. I would consider myself technically inept so if you have any questions about computers, anything to do with computers, or anything which attaches to a computer, you are better off asking someone else. Favourite colour is red and if I wasn't in engineering, I would be a wedding planner as event planning is a passion for me. For a further synopsis of my life, just ask. I am very approachable and will be willing to discuss anything related or unrelated to my position. In conclusion, I would like to say thank you for the support so far, and I look forward to representing you all these next 16 months as your VP Internal [Operations]!

XO XO Andrew Fisher.

[gmail.com](mailto:bsoc.vped@gmail.com).

I have a lot of ideas for the upcoming fall term. I want to revamp communication to EngSoc and the engineering student body as a whole. I also want to build on what my predecessor Alex Hogeveen Rutter has done by representing students in various meetings by bringing our voices into the decision making process. Stay tuned for more updates in the fall term of the Iron Warrior.



Angelo Alaimo

Incoming Executive (Left to Right): Alessia Danelon, Alexandra Collins, Owen Coutts, Andrew Fisher, Yasser Al-Khder

Waterloo gets noticed at CEC!



ERIN MATHESON
3A CHEMICAL

From March 10 to 13, undergraduate engineering students from across the country flocked to McGill University in Montreal, Quebec for the Canadian Engineering Competition (CEC). The top two finishers from the Ontario, Quebec, West and Atlantic Engineering Competitions in Team Design, Senior Team Design, Consulting, Communications and Debate brought their game faces for what is easily the most prestigious engineering competition this has to offer, as well as one of the most incredible weekends you could be a part of. This year, as you may remember from the previous recap of the Ontario Engineering Competition, Waterloo sent two

teams, competing in Team Design and Communications.

One of the main differences between CEC and previous qualifier competitions is the layout of the competition itself. OEC and WEC (the Waterloo Engineering Competition) are crammed into just under two days, and most of the longer competitions such as Senior Design and Consulting go overnight allowing contestants little sleep. CEC on the other hand had an extra day, and as a result all of the competitions happened during daylight, which left plenty of time to schmooze and booze with competitors from across the country, as well as the faculty Deans from most of the participating schools and several company representatives sent by the sponsors. Oddly enough, there were just as many late nights and just as little sleep had by most of the people in attendance.

The big highlight of the whole week-

end for team UW was when the Junior Design team consisting of Shari King, Kornel Niedziela, Marc-Andre Simard and Adam Thagard won the Team Design competition. They were given a total of 4 hours to design and build a prototype for an amphibious vehicle capable of driving over multiple types of terrain including grass, sand and turbulent water. They were measured both on the performance of their prototype as well as the composition of a formal presentation in which they had to describe the various design features of the prototype that they had built.

Other honourable mentions go to Conestoga College, who had already received some honourable mentions for their first place finish at OEC, and only after one year of accreditation. In the Senior Design Competition at CEC, they had to design and build a prototype for a bridge capable of sensing when a boat

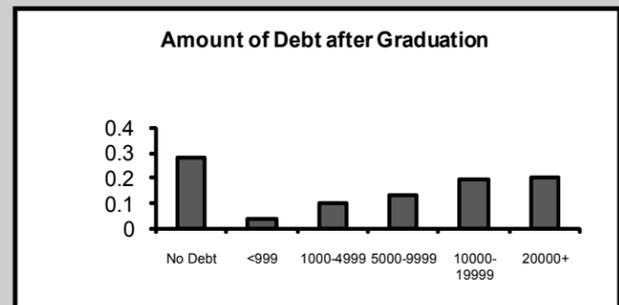
was approaching and be able to open up to clear a path for it, then sense when the boat was gone and proceed to close. The prototype also had to withstand a substantial amount of added weight that was meant to simulate heavy truck traffic. Conestoga's team walked away with second place by the end of the night, as well as the W. R. Petri Award for Innovative Design, all of this in their first year of competition!

Regardless of the results, a phenomenal weekend was had by all. It was a great chance to network with some of the best and brightest students, as well as representatives from some of the countries top companies, even if it was over pizza and poutine at 3 in the morning. If you'd like to get involved in competitions, check out the Waterloo Engineering Competition, which is the qualifier for OEC that is run in the Spring and Fall terms.

Debt Load Survey Results

1	Term Total				
	Total Responses	907			
	Number of surveys sent	2025			
	Response %	45%			
	Number of Students in core classes	3406			
2	Does your family support you financially? (891 responses)				
	Yes	64%	No	36%	
3	Average Cost of Living for a 4 month School Term (883 responses)	\$10,331			
4	Average Cost of Living for a 4 month Work Term (742 responses)	\$4,110			
5	Have you applied for local aid or other bursaries to pay for school? (893 responses)				
	Yes	43%	No	45%	Not Yet 12%
6	Have you applied for OSAP? (900 responses)				
	Yes & Received	41%	Yes & Denied	13%	
	No	45%			
7	Do you have a loan for academic purposes? (890 responses)				
	Yes	41%	No	50%	Not Yet 10%
7a	How much is the student loan? (494 responses)				
	1-499	9%	500-999	2%	
	1000-1999	5%	2000-4999	19%	
	5000-9999	30%	10000+	33%	
8	Has the differential tuition increases caused you hardship?				

	(545 responses)				
	Yes	43%	No	26%	Not Yet 31%
9	How much debt do you expect to be in by graduation? (540 responses)				
	No Debt	27%	<999	4%	
	1000-4999	14%	5000-9999	12%	
	10000-19999	19%	20000+	23%	
10	Do you live at home while at school? (552 responses)				
	Usually	7%	Used to	2%	
	No	91%			
11	Have you lived at home while on work terms? (555 responses)				
	Always	13%	Sometimes	43%	
	Never	43%			
12	Average of the weekly salary while on work term (514 responses)	\$676			



Bell's Bid for CTV Approved, Worth \$1.3 Billion



JACOB TERRY
1B NANOTECHNOLOGY

In one of the biggest ownership changes in Canadian history since CTV bought CHUM in 2007, Bell Canada's \$1.3 billion takeover proposal for CTV has been approved by the Canadian Radio-television and Telecommunications Commissions (CRTC) last week, raising concerns about vertical integration in the television and networking industry.

The bid was first proposed in September last year for Bell to buy out the shares in CTVglobemedia currently held by The Woodbridge Company, Ontario Teachers' Pension Plan and Torstar, which would bring Bell's share in the company from 15% to 100%. CTVglobemedia is the company which owns radio stations, the CTV and A networks, and a majority share in specialty channels such as TSN and Discovery Channel. It also owned The Globe and Mail until the bid was proposed. Part of the deal was to give The Woodbridge Company an 85% share in the newspaper, with Bell Canada owning the other 15%. This part of the deal was accepted relatively quickly. This is the second time Bell will have control of the CTV division, as they previously had a majority share from 2000 to 2006 when the division was known as Bell Globemedia.

Bell's worry is that if they don't move to buy a major content provider now, they will have to buy most, if not all, of their content from competitors with entrenched media strongholds. They're also worried about the exclusive content agreements other wireless providers have, which could put Bell in an unfavourable position. Rogers and Shaw are already experimenting with mobile video and Bell wants in on the mobile action. Bell's purchase of CTV means every major broadcaster is now owned by a serv-

ice provider, with Rogers owning Citytv, Shaw owning Global, and Quebecor Media owning French megaton TVA.

As a result of recent purchases like this one, the CRTC has made a move to temporarily stop media companies from publishing their content exclusively. The CRTC is holding a set of hearings in June to hear opinions on how vertical integration affects the communications industry and on content exclusivity for mobile devices. After these hearings, the CRTC plans on holding discussions on TV content exclusivity for mobile devices.

The CRTC also made a provision in Bell's purchase that they must make a \$239.3 million tangible benefits package which includes guidelines on where those benefits should go. Bell is to fund new morning and afternoon news programs in Western Canada, maintain programming on CTV's A network for at least three years, and produce independent Canadian

programming. Bell is also to increase the Bell TV carriage of smaller stations. Bell's benefits package for CTV was most notable for funding the development of Corner Gas, which ran for five years and is one of the most successful Canadian comedies in recent memory.

When Bell completes the deal with CTV, it will rename the CTVglobemedia unit to Bell Media, which will include the CTV network, CTV radio stations and Bell's Sympatico.ca Internet portal. Bell plans to expand their Internet and mobile programming through their new CTV content and will charge competitors to use that content. BCE CEO and president George Cope believes that mobile video could be negotiated the same way specialty TV stations are with service providers now.

Why should you care? Many of you probably catch old TV shows on CTV's site. If you missed shows like The Big Bang Theory or The Amazing Race, CTV

posts the most recent episodes up on their site. With Bell's purchase of CTV and other providers purchasing content creators, expect this content to be dealt with in a more financially minded manner. Instead of going online to watch them from any network, you may end up logging into an app on your phone or into a website online using your service provider account to access content, in a similar vein as to how Rogers on Demand works for TV. The possibilities are endless for content delivery, but expect things to change. It might not be a change you easily accept, as your monthly phone, Internet and TV bills could shake up in the next few years, and the way you digest your content could completely change. The only way to find out is to wait for all the corporate deals and purchases to go through and see how their services affect the way you talk to your friends, check your Facebook or watch that show you missed last night.

Sandford Fleming Foundation

Professionalism.
Leadership.
Communication.

There's more to an engineering education than engineering.

The SFF Memorial Leadership Award Nominations

In recognition of the late Professors Saip Alpay and Wm. C. Nichol, and Sam Ceccerallo, Robert Elligsen, later former students of the Faculty of Engineering

The Leadership Award is granted to an intermediate-level undergraduate student in the Faculty of Engineering who has demonstrated outstanding contributions to the Faculty in the promotion of extra-curricular activities, including, but not limited to: Intramural Athletics, promotion of Engineering Society and Sandford Fleming Foundation events, competitions, etc., and for the support of associations, both on and off campus.

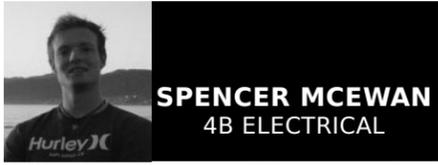
Nominations for the Memorial Leadership Award can originate from student groups, faculty members, or other individuals. A Letter of Nomination and Letters of Support from colleagues, faculty, and others familiar with the nominee's accomplishments are extremely important and form the major basis upon which the Executive Committee of the Sandford Fleming Foundation will form its decision. Nominations must be submitted to the Foundation by April 1 and/or before the last day of the student's 3A term.

The Memorial Leadership Award consists of a Certificate plus a citation, and an honorarium of \$1,000.

Nominations Must be Submitted to the SFF Office Manager by April 30, 2011.

**E2-3336, Extension 84008, sff@engmail.uwaterloo.ca
www.eng.uwaterloo.ca/~sff**

What's Your Plan?



SPENCER MCEWAN
4B ELECTRICAL

Sooner or later, we all have to graduate and enter the real world. For many of us, that time will come immediately after our 4B term. Others will decide to specialize and continue on with further education, either with graduate studies in engineering or will switch professions entirely. As we progress through our undergraduate careers, here is one question that many of us don't set out answering until we are close to graduating: What's your plan?

Here is the hard truth. Job opportunities rarely fall into our lap. We have to work for them, some more than others. The majority of individuals who land awesome jobs have had some idea of what they have wanted to do, and have taken steps to put themselves in a position to land their dream job.

Over my undergraduate career, I have made some important realizations I wish to pass along to the rest of my undergraduate colleagues. Take some time and consider these four points seriously. They may help shape the future of your professional life and significantly reduce the amount of work you need to do to snag the career and life you really want.

1. What are you actually interested in?

This is the million dollar question. You will be wasting precious time if you eff

around and don't spend the time to figure out what it is you actually want to do. What area of engineering do you want to specialize in? Or, do you even want to continue on in engineering after you graduate? There are endless possibilities you can take with your professional career. Don't get locked in for five years studying something you have no interest in. It's okay to change your mind; it's better to realize this a year in instead of getting a degree you will never use.

This is the same for jobs. If you don't like what you are doing, change it. Life is too short to be spent doing work you don't have a passion for. Responsibilities like a family and a mortgage will eventually limit this freedom, but that is why you should take the time to start figuring it out now, instead of waiting until you settle down.

2. Build your resume.

I hate to say it, but that resume of yours is a golden ticket in a lot of cases to a lot of opportunities. The ability to convey where you have been employed, what projects you have worked on, and what type of extracurricular involvement you have done speaks volumes about yourself.

This is Especially true for the first and second years, these are not years to waste. You have so many opportunities in university to pursue extracurricular activities. Getting involved early with a student build team, a student newspaper, a charity, or student government are great ways to

learn something outside of your academics that is most likely a transferable skill for the real world. Who knows? You may stumble across something that you become passionate about.

For students who are interested in pursuing graduate studies, make sure you take the time and do research underneath a professor. If you don't know what the process is to apply to graduate school, or what the NSERC and OGS scholarships are, do some research now. Many institutions lean heavily on the amount of research and other things you have done in your spare time.

We have a great advantage with the co-op program at UW. For many of us, we will be able to compile a work resume that students at other universities are extremely envious of. Don't sell yourself short. Articulate what you have done, and don't be afraid to take some poetic license with your descriptions. You can take a mundane job description and transform it into a very interesting set of job responsibilities.

3. Develop a 10-year plan.

Where do you see yourself when you are 30?

There is no reason why you can't sit down and write down what you hope to accomplish by this point in your life. Although one work term may change your mind on what you want to do, the key is that you can always change your plan. At least with a plan, you have an idea of what you want to do with your professional life.

It gives you a high level idea of what you hope to accomplish, so then you can slowly start figuring out what steps you need to take to get there.

4. Never be finished with your education.

There are a great deal of us that believe that our education suddenly stops when we write that last exam in 4B and we graduate. This is a terrible mindset to have.

Many of us don't realize that a large percentage of us will change careers at some point in our lives. If you allow your education to stagnate and you only focus on your current job, you will be at a distinct disadvantage in terms of your marketability. Plan to continue taking courses, be it management courses, technical courses, or interest courses. Keep your skill set fresh and up-to-date. Don't be afraid to develop personal projects that allow you to continue to learn and grow. It will pay off in the short term for yourself, and it may pay off in the long term if you decide to switch jobs, positions, or careers.

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Passion is everything. If you are genuinely interested in what you are doing for a living, your life will be more fulfilling. Don't be afraid to take a chance and chase your passions. If you don't know what your passion is, don't fret! You'll figure it out. Just remember, it's up to you to find it.

uOttawa Elections Drama



KEVIN LING
3B COMPUTER

While UW saw the antics of Team Rhino during this year's Federation of Students elections, more serious issues and allegations have arisen from the Student Federation of the University of Ottawa's (SFUO) elections.

Following the SFUO's February 15-17 elections, the candidate with the most votes in the VP-Finance race, Tristan Denommé, was disqualified for breaking campaigning rules. The electoral committee found Denommé guilty of posting posters in unauthorized locations, publishing a false statement, and several

other minor offences as well as failing to respond to these charges. With a low voter turnout, talk of tampering and election rigging began almost immediately. The winner of the VP-Finance race was declared to be Sarah Jayne King, who was the only other candidate in the race.

The uOttawa student community is now up in arms over the results of the elections. Many students are arguing that there should either be a ratification process or a by-election to fill the VP-Finance position. The SFUO constitution states that during the elections process, candidates must either win the election or be ratified to win a position.

During the elections, some uOttawa students set up a website (www.uoleaks.com) for people to report election rule violations anonymously. Now after the

elections, the site continues to gather information on the proceedings of the SFUO, particularly those relating to Denommé's appeal of his disqualification. uoLeaks is rife with allegations of questionable conduct from the SFUO executives.

With the Board of Advisors upholding the disqualification of Denommé, Denommé's supporters resorted to staging a sit-in protest in the SFUO office. Several other protests against the SFUO's decision have also taken place, as well as counter-protests against the supporters of Denommé.

Another consequence of the SFUO elections debacle is that several faculty student societies have decided that the SFUO is no longer capable of running its own elections properly and following its

own policies. The uOttawa Engineering Student Society is planning a referendum to separate from their student federation, and they have the support of their faculty. Other societies are also discussing the possibility of leaving the SFUO.

The most unfortunate outcome of this situation is that it has dissuaded many younger students from participating in student life activities. Student federations and societies should aim to improve the quality of student life rather than to be a reason for concern and protest. Given the current state of animosity between certain parties on the uOttawa campus, it seems like the fundamental goal of improving student life has been thrown to the side amongst all the arguments.

Engineering and Politics



JON MARTIN
3A CIVIL

Egypt has seen its share of news in the last few weeks, from the development of the uprising, subsequent demonstrations, and the ultimate resignation of President Hosni Mubarak. Now there is the introduction of the new Cabinet, sworn in recently by the Egyptian military.

Many members of the existing government have been removed and replaced as a direct result of public protests. In addition to Mubarak himself, many of his closest supporters have also been replaced, ridding the government of the corruption it has contained for many years. Of interest to our engineering community is the appointment of the new Prime Minister, Essam Sharaf, a U.S. educated civil engineer. This new caretaker government will be responsible for steering the country through a difficult transition period to-

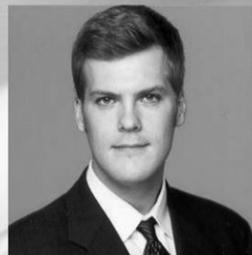
wards free elections. Sharaf also joins the ranks of high ranking politicians holding engineering degrees, as opposed to gaining office after legal or military careers.

A famous representative of this selective group is Herbert Hoover, the 31st President of the United States (in office March 4, 1929 – March 4, 1933). Hoover was trained as a professional engineering, specializing in mining and civil. Despite not attending high school, Hoover learned bookkeeping, typing, and math in night school, then entered Stanford University in 1891: the university's first year. Hoover worked extensively in China, learning Mandarin, which he used later in the White House so that he and his wife could avoid eavesdroppers, as well as literally writing the textbook on mining. Despite not having any direct role in the project itself, the Hoover Dam was named after Hoover after its completion. Hoover is remembered for challenging preconceived ideas, taking chances with economic programs to pull the United States out of the Great Depression, and generally making a

lot of heavily opposed choices.

With the general distrust of politicians and lawyers in the general public I think it is time again for politicians to come from a background of logic and acceptance of difficult decisions. Too often decisions are made based on who will get the most votes, rather than what should really be done for the good of the country, or the world. Let's get back to that kind of ideal, making the difficult decisions not for the fact that you may not get re-elected, but because it must be done.

Beyond the Ring
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Simon Dimuantes

The speaker will be discussing...

"Essential skills that many Engineers lack: Why technical mastery alone is no longer enough"

Question and answer period to follow

Thursday, March 31, 2011
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Pizza and beverages will be provided

Future of Gaming: Philosophy



**JON
MARTIN**
OBI JON1138

Have you ever actually read the comments on a discussion board? I don't mean the most recent five or six, I mean them all (or at least the first sixty to one hundred). If you ever had you will come to two inevitable conclusions.

1) Everybody is an idiot, or at least your IQ dips the more time you spend online.

2) People like to argue... just because.

The second point is what I am going to be talking about mostly this issue, specifically about the hate and stereotyping that exists within the gaming community. The gaming community seems to be one of the angriest groups when it comes to internet message boards – or maybe it's a tie with the Mac vs. PC groups. You cannot read a single article about anything video game related without someone posting a message of "Xbox sucks, PS3 rules" or "PS3 sucks, Xbox rules". Take your pick as they are equally prevalent, and that is an important point. Both sides are pretty much equal when it comes to hating the other; each will focus on different things, but they both end

up degenerating into simple hate arguments and childish comments.

I have said before that I don't think there is a single 'best' console, each has its benefits and weaknesses, and each caters to a different group. Of course there are cross-platform titles, which bridge the gap and allow everyone to enjoy a game no matter what system they own. Even in these cases there is more hate between groups, propagated by subtle differences in games. Check out the discussion forums on an upcoming or recently released game and you will always see people arguing about the frame rate of the game, or the degree of anti-aliasing, or the pixel count in a specific model. In all of these cases people are arguing about the graphics components of the games – not the gaming components. If someone played the game on a system outputting at 30 frames per second (fps) at 1080p resolution while another person played the game at 60 fps at 1080i resolution, who had more fun?

Well, that has absolutely nothing to do with the technology does it? It has to do with the game, the experience they had within the game world, and the interactions with fellow gamers. I firmly believe that a game is nothing without a great premise and story (or lack thereof for many of the most addictive games like Plants vs. Zom-

bies and Angry Birds), no matter how great the graphics. Too many times it seems that developers create a new graphics engine, or an amazing new gimmick – I'm referring to in game gimmicks like time control or terrain modification – and then they try to slap on a story to market the game. Anyone ever play Timeshift? I mean the original version, not the actual release version. I have subscribed to the Xbox Magazine for several years now, and every month I get a new DVD with all of the latest demos, which definitely helps with clearing space off the hard drive and not having to re-download demos if I ever want to play the game again.

Timeshift is an example of a game where the public response has had a visible impact on developers. The first Timeshift demo was absolutely horrible. Within a month it was pulled from Xbox Live, and replaced by a new demo a long time later. The new demo was totally different, from the story and motivation for the adventure down to the time control mechanics themselves. Now I have two demo discs with a Timeshift demo on each one, demos for the same game, which are completely different. But one thing stayed the same – the graphics. The first game was horrible, and the second was a huge improvement, so that is my point: don't judge a game by its cover.

Back to the issue of message board hate, where the Nintendo fanboys are mysteriously missing. Maybe they are a more civilized bunch, maybe they respect the choices of other people more, or maybe they are too busy trying to catch every one of the 700 Pokémon – I really don't know. But it remains a common perception that Nintendo, and especially the Wii are catered towards a family market, not hardcore gamers. But what is a hardcore gamer? Is it the person who plays the most difficult games, yells at everyone in co-op who can't begin to compete with him? Or is it the person who plays games all the time, but could care less about being the best in the world, they just want to game with friends? Does it have to do with the game itself, where the best selling game with the highest reviews is the most hardcore? If so then games like Nintendogs, Mario and Pokemon are the real hardcore games, not Call of Duty and Gears of War.

I really don't know the answers, probably because there aren't any 'correct' answers, just like there isn't a 'best' console or handheld system. So that is my rant for this week, if you want a more humorous take on the current gaming news check out the Tin Soldier; I'm a little less preachy in that article. Until next term... Keep on Gaming.

What Makes the S in HTTPS So Significant?



JACOB TERRY
1B NANOTECHNOLOGY

Most people feel they've protected themselves with regards to web security. They will install antivirus suites, take precautions against which sites they give their personal information to and, for the most part, keep their passwords secret. Something horribly underrepresented in the image most people have of Internet security is HTTPS.

While Hypertext Transfer Protocol (HTTP) is the protocol for an overwhelming majority of websites, chances are you've come across an HTTPS website before. If you've used Gmail or Hotmail, JobMine, Quest, UW-ACE or bought something using PayPal; you've been on an HTTPS website. The "S" in HTTPS stands for Secure, and it keeps your data secured between you and the server. The difference is much like how you enter your password at a bank machine. Would you yell out each number in your PIN while you type it in finger by finger so everyone can see what it is, or would you keep the keypad covered and silently type each character in without detection from others? HTTP is much like the former example; with the right tools anyone can find out where you're browsing and what you submit. This can include things as generic as looking up the phone number of a pizza place nearby or could be as sensitive as how much is in your bank account. With a website served over HTTPS, you can minimize the risk of others seeing any of this information.

HTTPS isn't a new protocol, either. It's been around since 1994 when Netscape implemented it in its first version of Netscape Navigator, by securing HTTP websites with Secure Sockets Layer (SSL) encryption. As SSL encryption became Transport Layer Security (TLS) encryption, HTTPS was modified to reflect that change. It became a bigger deal last year when the Firefox add-on Firesheep was released, which was a mass-market way to enable users on an unsecured Wi-Fi network to access the information other users were putting into their unsecured websites.

In response to these simplified creeper

tools, more companies are placing a focus on secured browsing. At Waterloo, you may have noticed over the year that the university is pushing use of eduoam instead of uw-unsecured (formerly uw-secure and uw-wireless, respectively). While eduoam has been a little more troublesome, especially in the fall term, I've personally had next to no issues with it this term and strongly suggest others use it. Not only does HTTPS secure your web habits but a secured network does as well. Eduoam also works at other eduoam-enabled universities, so you should in theory only have to enter your data once.

Web browser creators are trying to give better visual cues of when a website is secure or not as well. In most browsers, there will be a lock located on the bottom or on the top of the browser on secure pages which, when clicked, displays information about the website's security certificate. When the certificate is extended, which is an extra level of validation, browsers have a green bar or green text which signifies the site has a signed extended validation certificate. On the server-side front; Facebook, Twitter and Tumblr have enabled HTTPS versions of their sites, which is a huge win for secured internet browsing as social networking is one of the largest usages for the Internet. Support for HTTPS isn't all there on Facebook though. When opening a Facebook application, the site prompts you to turn off HTTPS, but when you're out of the application it doesn't prompt you to turn it back on until you're on the main page again. It would be better if Facebook could keep the setting on for everything outside applications so users don't have to disable it every time they want to play a game.

Why is HTTPS not on every other website yet, if it's so good? HTTPS has a few drawbacks that stop websites without sensitive information from using it. HTTPS websites can not be cached in a web browser, which isn't a big deal for most North Americans. Users in countries such as England or Australia have more concern since caching reduces the need to reload elements from a webpage again, and since most servers are held in North America, those elements would take just as long to load every time they visit a page if the site

isn't cacheable, due to the distance between the server and the client. HTTPS also costs more to run on a website than HTTP, especially when websites become popular. Many people who have websites hosted on virtual hosts, which is common among smaller websites, can't implement HTTPS either. These are all obstacles which could be ironed out with time, as Internet

speeds increase and servers are strategically placed to minimize loading time. In the end, it's down to whether speed or security is more important, but we should be trying to strive for a fast, secure website, no matter where we are browsing. No one needs to know what website you're looking at, especially if you don't know them in the first place.

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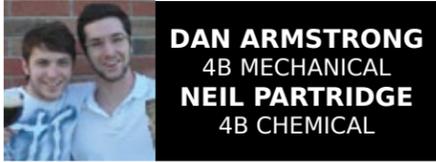
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The Brew Man Group - Final Thoughts



DAN ARMSTRONG
4B MECHANICAL
NEIL PARTRIDGE
4B CHEMICAL

Neil: My friends in beer, I can hardly believe that it's time for me to leave. I like to believe that Dan and I have contributed to the beer revolution, or at least had fun trying to convince you folks to spend more than \$2.00 a bottle. Alas, the road to becoming beer deities has been rocky and full of douchebaggery (mostly on Dan's part). I still remember when Dan stated that Rogue Brutal Bitter was nothing but a senseless hop bomb, and now the guy thinks Tree Hophead Double IPA is not bitter enough... Tisk tisk Dan, times do change you hypocritical bastard (just kidding bud). Regardless, the fact of the matter is that we are finally able to sample some diversity in Ontario, and that's a true cause to celebrate.

What's next for Neil? Continue adventures in brewing beer, or join the crowd and become a (sigh) responsible human being? Sadly, it will probably be the latter option; supporting the beer scene from the underground, but only after fighting the daily traffic jam. Apparently, brewing dreams do not come true - at least right away. It isn't all bad though, as the new graduate job (once I find one) is sure to be legit. Tons of training, becoming a competent engineer, and a budget for some sweet home-brew equipment. Bling bling! So as to not to overdo my part, I'll let Dan have his rant, which is sure to be full 'o spite. Remember to keep the hops fresh and the brew

chilled, but only slightly.

Dan: I may have called Brutal Bitter a hop bomb two years ago, but Neil didn't know the difference between gueuze and fruit lambic until two weeks ago. Some 'brewer'. (Love you, buddy.)

In the documentary Beer Wars, Greg Koch of Stone Brewing, one of America's most respected breweries, exclaims that he is angry about beer. This can seem like an absurd statement. Beer should be a joyous beverage for times of relaxation and celebration. Anger is for Neil when he's sucking ass at Call of Duty. But when I consider our cur-

rent situation, beer does bring quite a bit of anger to mind. Aside from the public's general apathy when it comes to mass-produced, flavourless beer, we Ontario drinkers must also endure the ever-frustrating practices of the LCBO and The Beer Store. Despite this anger, I am hopeful and optimistic about beer's future in our province. Breweries like Flying Monkeys, Beau's, Great Lakes, Mill Street, Black Oak, and Grand River are developing distinctive, high quality beers that are slowly becoming more and more widely available. And equally significant, beer drinkers are demon-

strating a demand for unique brews by snatching up the special releases at the LCBO. We may be a decade behind our neighbours to the South, but things are looking up.

What gets a person into craft beer? For me, the credit would have to go to my older brother. Like most, I began my drinking career with Keith's/Canadian/somecrappylager, but toward the end of high school I was introduced to Hoegaarden and Blanche de Chambly: two Belgian witbiers that completely shattered the conceptions I had about how beer could taste. I didn't instantly become an obsessive (hard to do at 17), but the seed for beer curiosity had been planted. That's all it took for me to end up with a basement full of bottles, a column about my favourite beverage, and a high-maintenance home-brewing housemate (who I respect like mad).

I can only conclude that it's those you're surrounded by who will get you into craft beer. The other day in class, two friends mentioned that the night before, they had each drunk a bottle of La Fin du Monde. Then another friend brought one to a party a few days later. Not to jeopardize my manliness, but I damn near shed a tear. I'd like to think I played some role in persuading them to select such a fine brew, but in the end it really doesn't matter. What matters is that great beer is getting more and more support these days. So grab a beer, dear readers, whether it be a 9% espresso-infused oak-aged imperial stout or a plain ol' lager, and raise a glass as The Brew Man Group bids you adieu.

And for the last time...



Ilya Panchenko

Dan and Neil taking part in one of their favourite past times: beer drinking

Props to hops // Dan and Neil

Review Based on a Trailer: Sucker Punch



JON RADICE
4B CHEMICAL

I guess it's come to this. Like many other column writers here, it looks like my time has come to move on and graduate on to bigger and better things. Looking back through the Iron Warrior archives, I found that I've written a total of 23 of these reviews based on their trailers, a sizeable amount for a pretty simple idea. Throughout my little run, I've ranted about the childishness of some movies and praised cartoons meant for children. However, this is the first movie I've looked at where I actually feel too old to see it. I guess it's one of those signs of getting older.

Sucker Punch is the latest creation from the guy that brought you a fair number of Whiz-bang, big hype movies of the last few years. Remember the buzz around 300? It was massive and it still is massive. It sprouted a whole bunch of memes, made time-shifting fight scenes interesting again after everyone and Big Momma's House had a Matrix-inspired bullet-dodging fight. It turned a few of my very straight (a little too straight if you ask me) friends gay, and everyone needed to rush out and get a new set of 16-pack abs. Remember the buzz around The Watchmen? Yeah, people saw it, but it really wasn't the cultural tour-de-force that 300 was. People on the whole saw it, enjoyed it and moved on. Maybe someone was Rorschach for Halloween - I can't really remember -

but it reached nowhere near the level of popularity as 300. It seems to me that the same drop in popularity, from 300 to Watchmen, will be seen from Watchmen to Sucker Punch.

Let's give a little rundown of the plot for those unaware. Cute girl gets sent away to an insane asylum. Is she wrongfully convicted? Probably, but who knows? She gets sent to the meanest looking all-girls looney bin this side of Transylvania where she's abused and locked up and apparently due to get a good ole lobotomy. So what is a gal to do? Escape in her mind, of course! Inside her mind she, along with the other inmates, fight voracious baddies like a giant dragon, mecha-samurais and weird 1940's contraptions from Nazi fiction. Does she escape? Is there a happy ending? Well, that's not for the trailer to tell us, silly. You have to find out when you watch!

What's wrong with that premise? We have fights, explosions and hot chicks: what more does your simple male-mind need, oh author? I don't know, it just seems so... slapdash. Like the masturbatory fantasy of a 14-year old anime fan with no access to the internet, this movie tries to combine too many cool things that they end up so juvenile. Hot girls with kitanas fighting giant fire-breathing reptiles may seem cool to our little brothers, but it just feels a tad flaky at this age. And where the previous movies had those well-painted, intense scenes, such as running the men off the cliff in 300, there doesn't seem to be the same development in Sucker Punch. Instead of revelling in the scene around us, director Zack Snyder decided just to

pile on another layer of what he thinks is cool. "Oh, well you think samurais with miniguns is cool, well here's a giant Nazi robot. Think that's cool? Well now we're fighting futuristic cyborgs!" As a result, the battles seem cheapened and flimsy, the main girls seem too invulnerable and, as a result, one-dimensional. There isn't an apparent flow, oh, oh, oh and the dialogue is hella cheesy to boot.

Does it look pretty like the other films? Yes, but. All the trailer has is action whizzing by us, so you can't pick up on the graphical style that made Snyder's other movies seem incredibly rich. Sucker Punch is just too spastic for its own good, and unless the movie is about 3 hours long (it's only 2), it doesn't seem like the scenes shown can be put in the same movie without tripping over each other. Despite my appreciation, I wasn't really a fan of Snyder's other films. They were entertaining eye-candy that ended up looking frail and undernourished. Sucker Punch seems to be in the same vein and then some. Add some more incoherence for the sake of some teenager to sweatily exclaim "Oh man, just like my

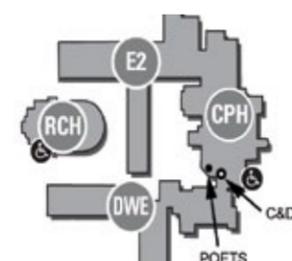
fan-fiction!", and you have the making of a beautiful mess.

Can you sit through it? Will you be entertained? Again: yes, but. Yes, but there isn't much going on upstairs of this movie. Yes, but you'll probably walk out of the theatre wondering what the hell happened. Yes, but there are better movies out there. It's a movie to skip, or at least one to go on Tuesdays when the theatre is cheap. Sucker Punch waltzes into theatres on March 25.

MORE THAN JUST COFFEE & DONUTS

The EngSoc C&D has more than just Coffee and Donuts. Stop by for a variety of freshly prepared sandwiches, baked goods, soups, and more! It is run by students for students, so the prices can't be beat!

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MONDAY-THURSDAY 7:30AM - 7:00 PM
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ENGINEERING SOCIETY



Running Club: The Term in Review



**KIRSTEN
HOEDLMOSER**
4B CHEMICAL

The running club is fairly young – it only began last summer and then took a break for the fall term. Despite its newness, we've been dedicated to our runs and routes and have covered a pretty solid portion of the roads surrounding campus.

We've circled Ring Road upwards of 20 times, and our beginner group has run through the park so many times the llamas know us by name. The intermediate and advanced groups covered the roads north of campus, along Beringer and Weber, and all the way out to Laurel Lake. The Advanced group covered upwards of 180 km on our twice weekly runs over the last 2 months alone!

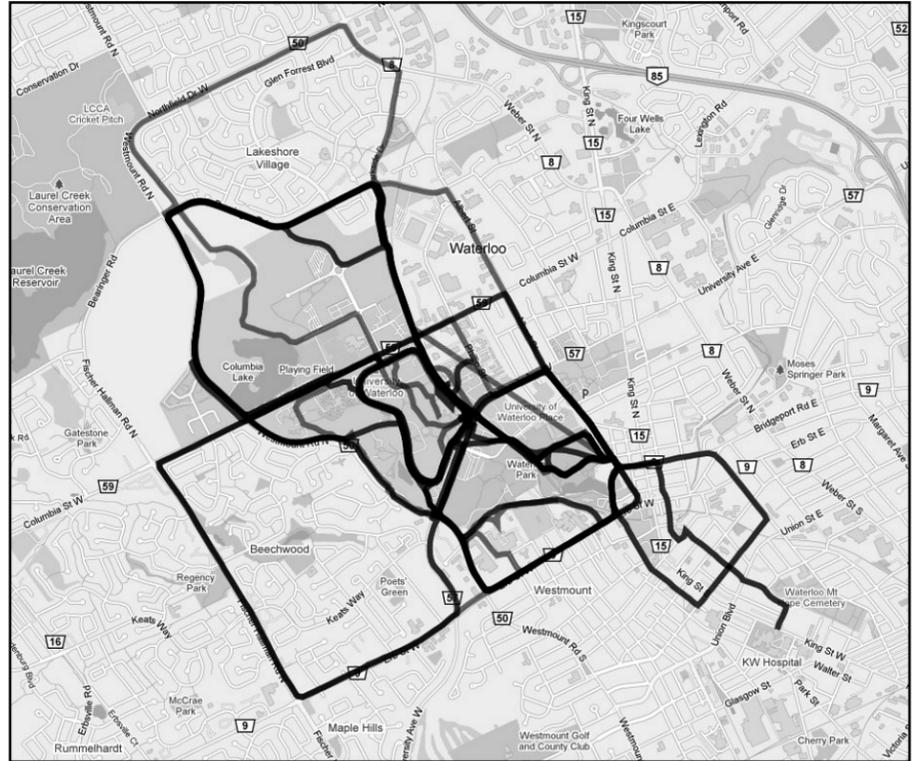
Our group runs were big successes – from 5k time trials to hill repeats along Columbia, doing these workouts together made them pass quickly and (relatively) painlessly. No matter whether we had 2 people

show up or 18 together on the POETS patio to start the run, having company on Tuesdays and Thursdays made it easy to lace up and hit the streets.

I'd like to take this opportunity to thank the pace group leaders for their dedication in sharing their love of running and positive attitudes with all the runners who came out. Thank you to Cailin Hillier, Drew Lemcke, Adam Klett, Graham Stonebridge, and also to Noel McGregor and John Chibuk for helping out on short notice a few times this term.

Thank you to all the runners who came out this term – whether it was only once or whether you came to every group run, it was fantastic to see you, get to know you, and share some time together on the road.

We have 2 more weeks of the running group left before the end of the term. If you're interested in getting into running, you're welcome to join us at 5:00 pm on the POETS patio on Tuesdays and Thursdays. We've got another group run planned, as well as an end-of-term get together, so come on out! New runners of any ability are more than welcome. We can't wait to see you!



The running club ran all over Waterloo!

Graham Stonebridge

The Five-Tool Player: Draft Picks



BOBBY LEUNG
4B MECHANICAL

Hello loyal readers! I wanted to end the inaugural term of the Five-Tool Player with results and analysis of my first draft of the season. I will share with you my draft strategy, how I feel about my draft, some of my reaches and steals, and things I need to do moving forward. I have posted by team below, showing which round and overall position each player was drafted in. This league is a standard 5x5 mixed league. I drafted eighth. As a shout out to you all, I named my team the Waterloo Warriors.

- (8) Ryan Braun (Mil - OF)
- (17) David Wright (NYM - 3B)
- (32) Kevin Youkilis (Bos - 1B)
- (41) Shin-Soo Choo (Cle - OF)
- (56) Justin Morneau (Min - 1B)
- (65) Yovani Gallardo (Mil - SP)
- (80) Alexei Ramirez (CWS - SS)
- (89) Alex Rios (CWS - OF)
- (104) Max Scherzer (Det - SP)
- (113) Chris Carpenter (StL - SP)
- (128) Brian Roberts (Bal - 2B)
- (137) John Axford (Mil - RP)
- (152) Matt Wieters (Bal - C)
- (161) Matt Thornton (CWS - RP)
- (176) Matt Garza (ChC - SP)
- (185) Colby Lewis (Tex - SP)
- (200) Edinson Volquez (Cin - SP)
- (209) Jorge De La Rosa (Col - SP)
- (224) Jhoulys Chacin (Col - SP,RP)
- (233) Jake McGee (TB - RP)
- (248) Adam LaRoche (Was - 1B)
- (257) Brandon Webb (Tex - SP)
- (272) Jordan Walden (LAA - RP)

Draft strategy

I remembered the painful defeats from last season when I came second in two leagues because I could not get one steal and one save on the last day of the season. As such, I approached this draft with balance in mind. I wanted a balanced offense that could compete and win all five categories in any given week, and I wanted a hoard of strikeout machines for my pitching staff. I tried not to reach for any pitchers because of the depth in that position. I certainly did not want to get a closer before round 6. As we mentioned before, there are so many that pop up during the season that there is no point in wasting an early pick that could go towards an impact hitter or pitcher. I wanted to grab offensive difference mak-

ers early and often, and piece together a solid pitching staff with strikeout guys that are not ratio liabilities. I stayed away from the Trevor Cahills and Tim Hudsons of the player pool. Closers were on the back of my mind. I wanted some saves, but I would make up my bullpen from the waiver wire throughout the season.

Draft Outcome

I feel that I really stuck to my draft strategy, with mixed results. Overall, I feel my team will be competitive in 9 of the 10 standard categories, with the lone exception clearly being saves. Again, I devalued those entering the draft, but I was too inflexible when multiple closers' runs passed me by. You will see that I filled out most of my offensive roster, with the exception of the last utility spot, after 13 rounds. Getting the Hebrew Hammer in the first was great. Spring training whispers have Ron Roenicke, the new Brewers skipper, wanting to run more than last season. If going 25/100/100/14 was an off year, I am extremely happy with that first overall pick. I wanted to build on that five-category contribution in the second round by drafting an equally toolsy player with David Wright. I was glad to have a shallow position addressed and have a very balanced foundation to start the draft. I wanted to fill in the rest of my offensive slots with the best overall player available approach. Getting Youk in the third was great, because he can go .300/25/100/100 in that Red Sox lineup, and he gives me 3B depth as the season moves forward. Rounding out my outfield with Choo and Rios in the 4th and 8th round respectively gave me 50-60 steals, 50 homers, 170 RBI and 170 runs along with a useful batting average. Mauer got drafted in the third round and the top-tier catchers, ending with McCann, were gone by the 6th. I stayed away from that mini-run because the catching talent plateaus at about the same level after McCann goes. I ended up getting post-hype stud Matt Wieters in the 13th round, who is basically 80% of McCann but seven rounds cheaper. Remember, when the hype machine was on full blast as he was coming up from the minors, it was established that the "i before e except after c" was because of Wieters. He has the talent around him in that rejuvenated line-up to give me great value in a talent-scarce position. At the end of the day, I am very happy with my offense. Morneau and Roberts are two health questions, but there is enough depth in the wire for emergency

duty (e.g. Gaby Sanchez, Marco Scutaro, Placido Polanco).

My pitching, on the other hand, leaves something to be desired. I am happy with my starting staff, which is full of players who have high strikeout rates. Of the top 20 guys with the highest K/9 in the past three seasons, I have six of them. None of them have glaringly bad ratios, with the exception of Edinson Volquez and Jorge De La Rosa. For the former, I am going to attribute that to recovering from Tommy John Surgery. For the latter, his ratios have gone down in each of the last three seasons. I am confident these guys will be closer to 3.80 ERA and 1.30 WHIP with 325+ strikeouts between them. Just for insurance, I have Chris Carpenter as a WHIP anchor for any tough starts. In addition, I think Garza is a great grab in his new digs in the Chicago north side. Getting out of the AL East and into the NL always helps with the ERA and strikeout numbers. I was even able to grab Webb in the second to last round as a cheap lottery ticket. It is clear that my starters are more than adequate; the problem with my team is the relief pitching. I was a victim of having my guys getting drafted a pick or two from my slot. I had both Chris Sale and Hong-Chih Kuo queued up as WHIP and ERA cushions but they got snatched up before I could get them. Overall, I know I will be great in strikeouts and solid in ERA and WHIP, and I will probably get a ton of wins by both quality and quantity.

Reaches

Even though I am happy with Morneau being on my team, I think he is one of my bigger reaches. When it was my turn in the fifth round, it came down to Morneau and Morales as all the other power 1B were gone. I knew that Morales was not going to be available to start the season and Morneau was already playing spring training games, so I had to make sure I had a fat bat that can get me 100 RBI easily. We do forget that Morneau can be very helpful in the batting average category as he was hitting .345 before he suffered the concussion last year. I figured that with the injury risk he might last until the sixth round, but with some players I wanted already getting snatched up just before I could draft them, I had to act fast and get the Canadian on my team.

Another big reach was Yovani Gallardo. I drafted him about 20 spots earlier than his mid 80's ADP because another owner employed an interesting strategy with his

team. That owner picked top starters with his first six draft picks, so by the sixth round, Gallardo's skills were at a premium. I had to take him before the pitching talent dried up. However, despite my massive reach, I think this owner's strategy caused the other managers to devalue their pitching too much, leaving their staffs woefully untalented. Furthermore, this owner does not even have one respectable reliever for some saves. His strategy failed and caused many owners to draft subpar teams. Because I aimed for high K/9 and good quality ratios, this strategy likely helped me get many free points throughout the season.

Steals

I think Adam LaRoche is a major steal. We always praise Adam Dunn's consistency with hitting 40 homers-he has hit 38 homers seven seasons in a row and had 100 RBI in six of the last seven seasons. LaRoche is essentially mini-Dunn. He has hit 20 HR in each of the last six seasons, and 25 HR in each of the last three. He also consistently hovers around 80 RBI, peaking last year at 100 RBI. The 248th pick with the potential for 25 HR and 80+ RBI? That is highway robbery.

Based strictly on the difference rankings and draft slot, Jhoulys Chacin probably is the greatest steal of my draft. Ranked the 162nd overall player, I got him 62 spots later. He arguably has the best stuff of all the Rockies starters, and he is on the same team as Ulbado Jimenez. Guys like Jaime Garcia, Brett Myers, Brian Matusz, and Jake Peavy were all drafted ahead of Chacin, and he will likely outperform all of them. A rob job of the ages. I cannot say this enough times: You can wait for pitching!

Moving Forward

Jordan Walden must not exist on my roster as soon as humanly allowable. Honestly, at that point in the draft, I was tired, and I panicked a bit because Hong-Chih Kuo just got picked up before I could get him. I will immediately drop him for a Gaby Sanchez or an Ike Davis, someone who can get me 20-80-80 with no batting risk. I know I have to keep updated with closer news and grab the ones that pop up. I have enough starting pitching so I can maybe do a 2-for-1 or 3-for-2 trade with pitching-needy owners to make room. Even without these minor changes, I feel I will hover around the top three in the standings all season long, but with a key trade or two, I expect that gold trophy at the end of the season.

BIG THINGS with Will Zochodne

World's Largest Self Propelled Object (Or One Big Ass Boat)



WILL ZOCHODNE
3B MECHANICAL

Total Weight: 1.45 BILLION lbs
Maximum Speed: 30 km/h
Length: 1504 ft
Typical Cargo Value: 122 million USD

The Seawise Giant (aka: The Happy Giant, The Jahre Viking, Knock Nevis, & Mont) is the largest moving object ever produced. Get this: the Seawise Giant is the only ship that was not allowed to sail in the English Channel because officials thought it could cause minor flooding. Ditto for the Panama and Suez canals. This mega ship was designed to carry oil, but if you wanted, it could carry 9.6 million 150 lb illegal immigrants.

It's a testament to modern technology

that this beast only needed a crew of 35 at sea. Since the ship is nearly half a kilometre long, the crew used bicycles to travel along the length. More impressively though, the entire orgy of high strength steel that is the Seawise Giant was moved by one 30 foot diameter propeller that weighed nearly 100,000 lbs. That's the same weight as a Boeing 737 jetliner!

Maybe you think the top speed of 30 km/h is on the slow side. Even at this speed, the Seawise Giant would take 8.7 kilometres to stop. That is an incomprehensible amount of momentum. How many of you have heard that the space shuttle combined with the solid rocket boosters was the most powerful machine on the planet? Wrong. Even when the space shuttle is travelling at 4000 km/h the Seawise Giant has twice the momentum travelling at 30 km/h. What other cool things could you do with that kind of energy? You could launch a Meerkat and expect the pieces of it to land on Mars in a

time of 32 seconds.

During the Gulf War, the Seawise giant was attacked and sunk. Luckily though some badass company decided to salvage and sell this masterpiece of engineering. The ship was bought and used as an offshore storage container before being finally beached and scrapped this year. Who would have thought a ship longer than the Empire State Building would be impracticable to operate? Remember kids, bigger is always cooler but not always smarter.

Big things rock!



No exaggerations needed here, check out how low in the water the boat rides with a full load.

As always, send article suggestions to w.zochodne@gmail.com

Hitchcock is a Scary Mofu

They're an Engineer Too!



ERIN MATHESON
3A CHEMICAL

Movies are a wonderful chance to acceptably escape from the insanity of the world, even if only for an hour or two at the time for some entertainment. With the 2011 Academy Awards just over with, and finals around the corner, movie downloads are at an all time high. Now, while most contemplate whether or not to cave in and watch the latest totally manly rom-com or watch Inception again to see if it finally makes any sense, I myself am a huge fan of horror films. Lately within the horror genre, there's been a real resurgence of gory blood and gut slasher flicks, take Saw 1 through 67 for example. While watching someone getting sliced in half with a rusty spoon by a psychopath is nice and all, my favorites still remain the scare-your-pants-off thrillers. Although my current repertoire of scary movies isn't quite as up to snuff as I would have liked, mainly due to the fact that I'm convinced it would induce nightmares involving my numerical methods class and a lot of chainsaws, there are still some favorites of mine that I try to re-watch every now and then. Enter Alfred Hitchcock, the true king of suspense. A British filmmaker, who has since passed away in 1980 is still strongly known within mainstream culture for his classic horror films that will literally scare you senseless. Best part? Hitchcock was an engineer.

Born on August 13th, 1899 in Leytonstone, London as the youngest of three children; Hitchcock was named after his father's brother. He was raised Catholic and was sent to the Jesuit Classic school St. Ignatius; College in Stamford Hill, London. In later interviews Hitchcock often described his childhood as being very lonely and sheltered, which was often compounded by his obesity. He was frequently subject to very harsh and unusual parenting. He was once sent to a police station with a note from his father asking the officer to lock him away for ten minutes as punishment for bad behavior. His mother frequently made him address her while standing at the foot of her bed, especially if he behaved badly, and would make him stand there for hours. This idea of harsh treatment or wrongful accusations would later appear frequently in his films. The treatment he faced from his mother would later surface within the character Norman Bates in his movie Psycho in 1960.

After his father passed away when Hitchcock was only 14, he left St. Ignatius to study at the London County Council School of Engineering and Navigation in Poplar, London. After graduating, he became a draftsman and advertising designer with a cable company in London. It was here that he developed his interest in photography and film production. He started working as a title-card designer for the London branch of what would eventually become Paramount Pictures. In 1920, he made the transition to a full time position as a director of Islington Studios with its

American owner, Famous Players-Laskey. The transition to full time director took a total of five years.

Hitchcock had a slow start in mainstream film. In the early 1920's, the first few films he produced grabbed little mainstream attention and most were eventually dropped. In 1926, he finally broke his bad streak with the Lodger: A Story of the London Fog. The thriller was a major commercial success in the UK, and he also won over many critics with what was best described as his first "Hitchcockian" film where he incorporated themes that he would be later known for such as the "wrong man".

In 1929, he began working on his tenth film Blackmail. During the production of the film, the production studio decided to convert it to sound. As an early 'talkie' film, it is frequently cited as a landmark film by most critics. It is also considered to be the first British sound feature film. With the climax of the film taking place on the dome of the British Museum, this film began the tradition of using famous landmarks as the backdrop for suspense scenes in Hitchcock films. He also continued to be one of the first directors to utilize sound to enhance his films, both through sound effects as well as instructing his actors to emphasize certain words in their script to enhance the feeling of a scene. He later moved to the States in 1940 and began working in Hollywood.

Although he managed to direct and create a wide range of films outside of the horror genre during his time in Hollywood, it was still his frightening films that he was

the most famous for. His films were known for their signature plot twists and use of what was referred to as a 'MacGuffin', or the use of a type of decoy meant to serve thematic elements of the film. Hitchcock best explained, "There are two men sitting in a train going to Scotland and one man says to the other, 'Excuse me, sir, but what is that strange parcel you have on the luggage rack above you?' 'Oh', says the other, 'that's a MacGuffin.' 'Well,' says the first man, 'what's a MacGuffin?' The other answers, 'It's an apparatus for trapping lions in the Scottish Highlands.' 'But,' says the first man, 'there are no lions in the Scottish Highlands.' 'Well,' says the other, 'then that's no MacGuffin.'

Hitchcock continued making movies up until he passed away in his sleep in 1980. The last script he was working on never reached the screen, although it was released in a book published after his death. Over 30 years since his death, his legacy of films and technological contributions to the film industry still live on today. It was through his constant drive to improve the technological approach to filmmaking that he truly left his engineering mark on the industry. His films will remain classics for years to come. My personal suggestion to help get over the pre-final jitters? His classic from 1963 The Birds, a film depicting the gory overtaking of Bodega Bay California by thousands of birds. It'll scare the pants right off of you, and it also makes the walk to school in the springtime all that much more amusing with the geese flying overhead - classic.

prof Quotes

"When it comes to design there is an artistic part and a mechanical part. MATLAB can do the mechanical part and we don't teach the artistic part here" - Miller, ECE 380

"I did a work term at Nortel about 1000 years ago..." - Miller, ECE 380

"When I started in engineering, they had drafting. After three days of drafting, I decided that I had enough and moved to science. By Christmas, I decided I wanted a job and moved to engineering" - Miller, ECE 380

"Good morning. For those of you who don't know me, you've been skipping class for the past two months." - Harder, ECE 250

On the Colosseum: "The Romans were some of the best engineers who ever lived. Julius Caesar, P. Eng" - Evans, EARTH 438

"Now I'm making this up cause I don't know which function to use" - Shalit, MATH 211

On Fourier series. "You got a big spike, then some wavy stuff" - Shalit, MATH 211

"There is actually this site called 'Mines from Space.' Some nerd compiled it [...] it actually gets quite pornographic and silly" - Evans, EARTH 438

"Assume someone gives you a black box. Now if someone gives you a black box, you should be suspicious." - Grag, ECE 240

"Wow, I am so boring, the computer fell asleep" - Tan, MTE210

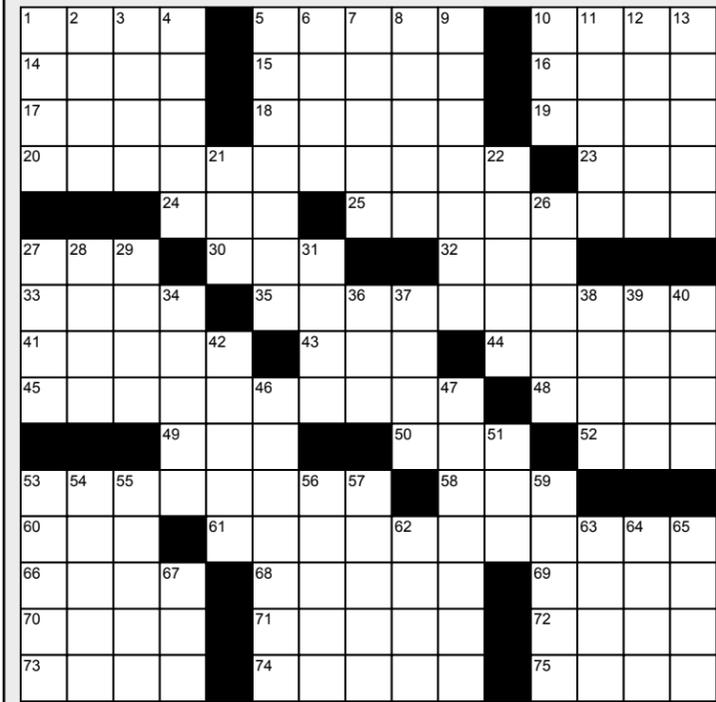
At end of lecture: "Thanks to all of you who stayed to the end, its nice to talk to someone" - Carr, MSCI 442

Disclaimer: profQuotes have not been confirmed by The Iron Warrior Staff and are meant for entertainment only.

Send in your profQuotes to: iwarrior@engmail.uwaterloo.ca

Briefly Stated

STUART LINLEY
2N NANOTECHNOLOGY

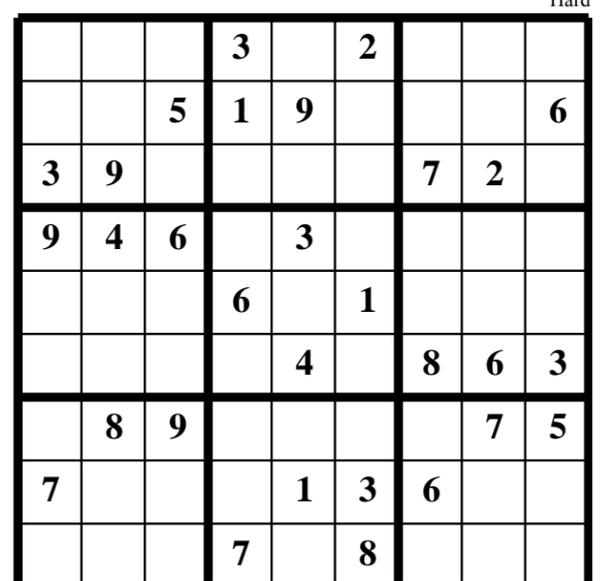
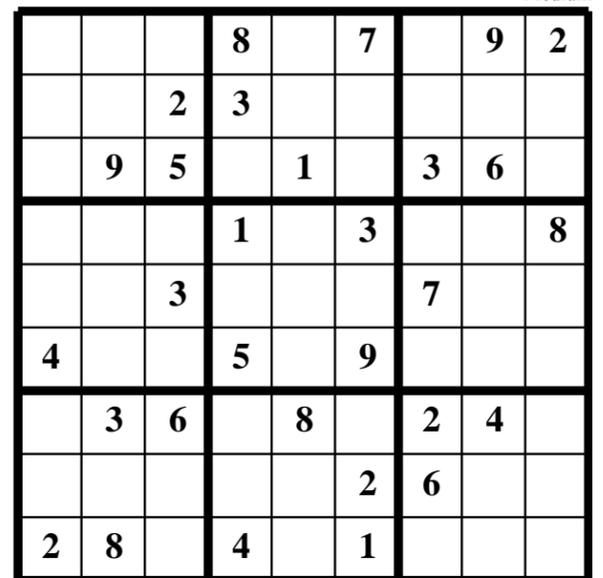
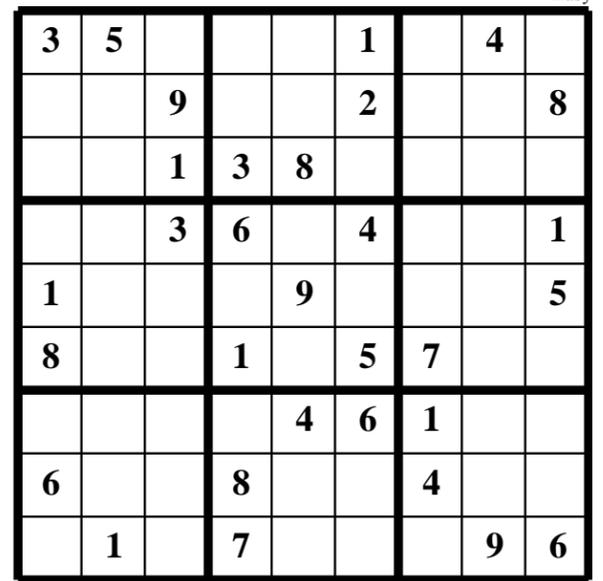


DOWN

- 1 Softly presses
- 2 Shape ____
- 3 Motif
- 4 Less risky
- 5 Morse "N"
- 6 Graph or ology prefix
- 7 Facebook request
- 8 German WWII pistol
- 9 Piker
- 10 ___ jiffy
- 11 Biblical mount
- 12 Symbols
- 13 Group principle
- 21 Catch rays
- 22 Attics
- 26 TV filler
- 27 Butter alt.
- 28 Covered walkway
- 29 Type of list
- 31 False
- 34 5 prefix
- 36 The Book of ____ (2010)
- 37 All: prefix
- 38 "...___ of bricks"
- 39 Pressing need?
- 40 Kent's girl
- 42 Oman resident
- 46 Earlier
- 47 Neil Peart or Jimmy Chamberlin
- 51 French pal
- 53 Wind surfers
- 54 Expound
- 55 Defective car
- 56 Count
- 57 Golfer Sam
- 59 Make z's
- 62 Andean volcano
- 63 Human, to a computer
- 64 Russian ruler
- 65 Sensory organs
- 67 Tolkien forest protector

ACROSS

- 1 Low platform
- 5 Tuners
- 10 Query about an object (2wds.)
- 14 "...___ half!"
- 15 Do a sum
- 16 Sweet
- 17 AAA stuff
- 18 Grass look-alike
- 19 Unknown, as a person (abbr.)
- 20 *1974 Skynyrd hit*
- 23 Hydrocarbon suffix
- 24 Cool, like pi
- 25 One instilling fear through bad grammar?
- 27 Edmonton time
- 30 Refusals
- 32 Spanish news agency
- 33 On
- 35 *American east-west wagon route*
- 41 Cowboy locale
- 43 Pluralized: material giving
- 44 Kama ____
- 45 *Ray Charles classic*
- 48 Lunch-time for some
- 49 Chinese food general
- 50 A Gershwin
- 52 Opposite of SSW
- 53 Coke flavourants
- 58 Ers
- 60 Anger
- 61 *Phrase describing an instant*
- 66 Won't bite
- 68 Shine
- 69 Greek mount
- 70 English boys' school
- 71 Uplift
- 72 Front opposite
- 73 Mailed
- 74 Actress Winona
- 75 Messes up



THE IRON INQUISITION
Angelo Alaimo, 3B Electrical

"If you could go back to first year and change one thing, what would it be?"



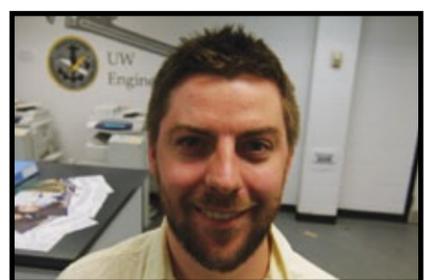
"Buy more condoms"
Jonathan Xiu, 4B Mechatronics



"Accepting Waterloo's offer"
Kosta Tsafatinos, 4B Civil



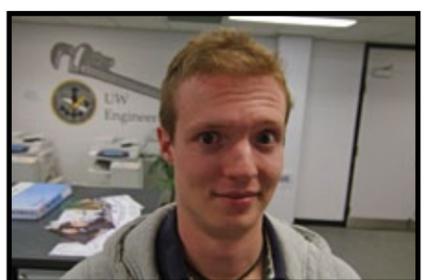
"Our relationship status on Facebook"
Leo Giménez & Mike Chlebowski,
4B Chemical



"3A round II"
Noel McGregor, 4B Electrical



"Pay more attention during calculus"
Paul Fugere, 4B Computer



"Get involved with student teams"
Spencer McEwan, 4B Electrical