

BRIEFS

Ice Ship Cometh

The Cold War was not the only conflict to yield eccentric technical developments. Indeed, war has always been a major driver of technology, and WWII was no exception. Enter Project Habakkuk

- Page 2

What I learned in The Tundra

This summer, I was fortunate to work for an engineering company who were understaffed and stressed to the seams with large projects away from the main offices. I was chosen as one of the lucky few who would join the mad rotation of environmental monitors at Tundra Mine.

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The Ups, Downs, and Sideways of 4th year Project

For many of us, 4th year project is what our schooling has been building up to prior to graduating and getting a job. And what an experience it has been thus far.

- Page 13

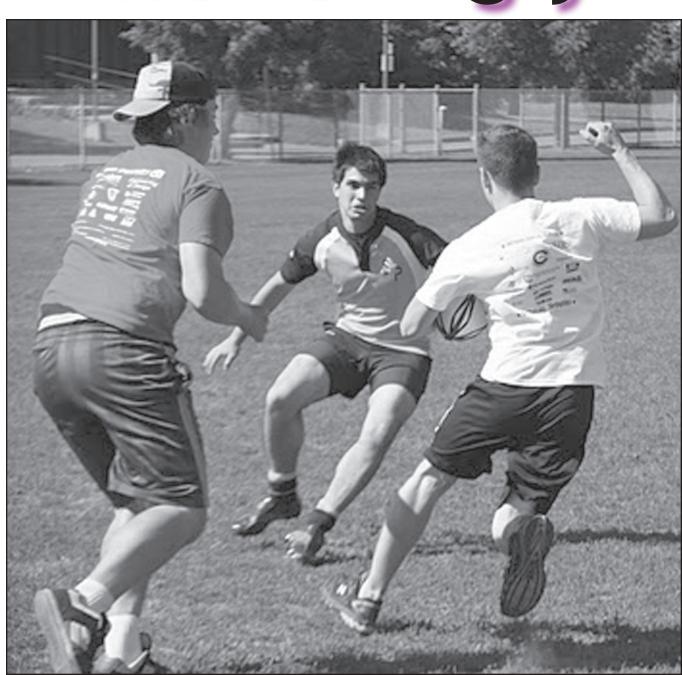
Entry To Mackenzie

So it is the weekend, midnight, or whenever you prefer to do your studying. You decide you need MATLAB, or some other form of software you don't own, or simply a quiet place, to do your late night work.

- Page 14

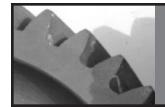
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You Won't Like Us When We're Angry

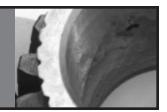


Warning: This newspaper may contain offensive material and should not be read by people who are easily offended. All opinions expressed within The Iron Times are solely those of the writers and contributors, and do not reflect the views of CSES unless indicated otherwise. This paper is jestful and satirical in nature and is not intended to be malicious in any manner.

February 2012 **Editorial**



EDITORIALS



Occupy Insanity

Trevor "Deepthroat" Irwin - MECH III -

When this article was written the latest "revolution" fad was the Occupy <insert place here> protests. Inspired by the so-called "Arab Spring" the goal is to reduce corporate greed by generally making a loud nuisance of yourself. This is the latest and possibly the most stupid entry in the cycle of pointless protests that the "Western" world has embarked on in the last couple of years. My only conclusion is that people have either genuinely run out of things to legitimately protest, or they have simply ignored the real pressing issue.

"But Trevor!" you say. "Corporations are evil! They take all your money!" Anyone want to guess how much the American economy relies on consumer purchases? The extreme irony is that 90% of you will either: a) look it up on Google (a corporation) or b) look it up on your smart phone using your wireless plan (sold by corporations). Approximately 70% of the American economy is directly linked to consumer services. That means if every American stopped buying shit for a year, 70% of Americans would be without a

job. The most ironic fact is that corporations don't care and never will.

We HAVE to have that new smart phone with BONUS intelligence, which means RIM, Android, Apple and Samsung are still making boatloads of money. We also NEED that beautiful coffee every morning, which means Starbucks will keep overcharging for its "Cafe Whatever." We also CAN'T LIVE without a seven-acre mega mansion which means every construction company in existence is fine. And because the above are so integral to our existence, we need to protect it; enter the big bad insurance companies. They need to hold the trillions and trillions they steal from the hardworking 99% of the population, so this 99% turns to the banks. And the banks are big black holes of puppy-killing executives who crushed Christmas.

If you haven't caught on yet that the Occupy Protesters are insane (as defined by Einstein), let's review their strategy: "buy every piece of crap that companies make, wave some signs and shout some slogans then wrap it all up for the release of the NEW IPHONE!" Every single problem with the world economy can be traced back to the simple fact that we spend beyond our means. Apparently it's a crime to save money, to not load up on every useless item that catches our eyes, and to question the almighty dollar. Listen to the protests: do they advocate replacing capitalism with something more fair? Do they advocate restraining government and corporate spending so bankruptcies don't happen? No and no.

So you want something to protest about. Fine. Protest the looming over-population crisis, or the state we have driven the environment to in the name of the almighty Dollar. Or better yet don't protest: act. Take a plane to Libya, Syria, Yemen, or Somalia and fight to change things. Don't sit here, nice and safe, and bitch about how unfair it is that corporations are taking advantage of our stupidity.

PEO-SC Conference Report

Erik "Caulk Tease" Willis - AERO IV -

The theme of this year's conference was shifting paradigms. What does this mean? To Ottawa U it meant entrepreneurship. The majority of the conference was based on this. The first speaker discussed why people need entrepreneurs. Entrepreneurs are typically very hard workers who help push the boundaries when it comes to making money and innovations. They get to make their own teams of people, which if chosen correctly can be very productive. The next presenter talked about how engineers can influence public policy. After all, engineers are the ones solving problems and working with people.

The presentation from PEO was essentially a tribute to Steve Jobs. Afterwards, the hiring agency Randstad presented on the subject of branding your-

self. Their advice was to focus on your strengths, de- jobs than yours parents had. velop skills that differentiate you from others, and develop leadership skills. It was also mentioned that you will not have a job for life and will have many more was entrepreneurship, and how it can benefit you.

Like I said the primary focus of the conference



From: The Editors <irontimes@cses.carleton.ca>

"An editorial is a piece of writing intended to promote an opinion or perspective." We would like to seriously emphasize this definition (pulled straight from Wikipedia) and reiterate that these opinions belong to their respective author and do not necessarily reflect the opinions of CSES as a whole.

These editorials are meant to voice an opinion and not with malicious intent. In extension, none of the articles presented in the issue or this publication as a whole is not intended to be malicious is any manner.



The Iron Times is a free publication of the Carleton Student Engineering Society.

Submissions are welcome from articles to photos, from news to entertainment to opinions, and everything in between. Anyone may send their submissions, complaints, questions and concerns to irontimes@cses.carleton.ca

> Editor-in-Chief Nolan Hunder

Thanks to all the writers that contributed.

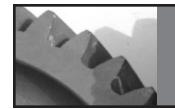
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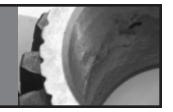
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I should be in class right now.

Exec Reports February 2012



EXEC REPORTS





President

Jamie "Invisible Man" Baressi
- SYSC IV -

Hey C-Eng! Hope you all survived fall semester and you haven't gone insane (yet)! For those of you who came to the CSES FGM and WGM, I would just like to thank you for being there as well as for your feedback during accountability. Hearing from you guys helps us do our job a lot better because it helps us know where you want us to improve. For those of you who competed in the Carleton Student Engineering Competition, congratulations! I hope you all enjoyed yourselves. To those of you who moved on to compete in OEC, I wish you all the best of luck!

To those asking about Engineering Jackets, the closest thing to an ETA I can give you at this point is the month of February. Thank you all for your patience. Keep it classy C-Eng, and - as usual - if you have questions for me, don't hesitate to contact me at president@cses.carleton.ca.



VP Social

Erik "Caulk Tease" Willis
- AERO IV -

I hope everyone enjoyed the months of October, November and December! I'm sure everyone had a great time at Engfrosh Reunion! I'm looking forward to going back again next year. This month we also had Yuk Yuk's 1 and 2, which - for everyone who didn't go - was hilarious! We will be having another comedy night this semester, so if you couldn't make it out last time, be sure to go to this one! Whirlwind went very well as well! I hope all you volunteers showed up at the volunteer appreciation party! Again, if you couldn't show up, there will be another one next semester.

Remember to check out the yellow calendar and Facebook for upcoming events. Any groups who want to plan events and see what other groups are planning, please email me and I will add you to a Google calendar.



VP Pubs

Caleigh "Paperbag Princess" Rutledge - ENVE III -

It's February already, and as you can see, the Iron Times is having some content issues. We would have liked to have printed a November issue, but you all made me sad by not writing articles. So do that more, please. We're looking at making the IT quarterly next year, so let me know if that's not okay!

As VP Pubs I've been catching up this month: paying printers, updating boards outside the office, and getting the website up to speed (check it out, because it's all very shiny and new!). We have a really nice calendar that has all of our events AND Flightsuit events, and if you click on each one, it gives you the description and time of the event. Got ideas for next year's handbook? Let me know!! Also, if you're interested in running for VP Publications, let's have a chat. I'd love to get to know you <3. Alright, until next time, keep it real and definitely write me about your goings-on. I'm sure you have an interesting life, and even if you don't think you're a good writer, I'd probably like to read about your life somehow. So you might as well write me SOMETHING!



VP Internal

Kevin "Assbeard" Atkins
- AERO III -

It has been a while since there was an Iron Times update from the VP-Internal Portfolio, so get ready for plenty of past and upcoming news! With the winter term upon us, a big congratulations goes out to all new graduates of C-Eng. We celebrated their achievement at the Iron Ring Ceremony at the Honest Lawyer in early December. If you didn't happen to make it to this event, don't worry: there will be another Iron Ring Ceremony in March when the winter graduates get their rings!

By the time this is released, it will be CSES elections season! Starting February 1st, the General Election process of CSES will begin. This is a great opportunity to get involved within the student community. Getting involved in extra-curriculars such as CSES is beneficial to you University experience and useful for differentiating yourself in job applications come graduation. Many positions do not require previous student involvement. Arrange a meeting with a member of the Executive and they will gladly fill you in on all the details of their position to prepare you for a successful election! If you wish to speak to me about this, e-mail me at internal@cses.carleton.ca

As for other upcoming events in my portfolio, keep an eye out for Pewter Mugs and Reflections Awards as they will be beginning shortly!



VP Academic

Matt "Soaker" Molkoski - AERO III -

Hi everyone! Welcome to the new semester. I hope you enjoyed your time off and - for those who celebrate - each of the various holidays! Firstly, I would like to congratulate my Pi Day Director, Melanie Blainey! She will be running the activities on March 14. If you are interested in helping out, please let us know! (My email will be at the end of this article, as always)

Secondly, we are moving into the planning and company contact stages for an exciting event known as Interface. This is a networking event CSES will be holding to help interface the working world with our students. If you are interested in helping with calling people, if you have ideas on how you think it should be run, or even if you know companies that would love to come to Carleton, let me know!

Third, on Saturday October 21st we held the first part of the Carleton Student Engineering Competition - the design and consulting competitions. I want to thank everyone who came out and participated, as well as my judges. The turnout was fantastic and the day ran smoothly, thanks in no small part to our fantastic volunteers and my Design Director, Connor Childerhose.

Last but not least, we are having some issues with our Academic Concerns email. If you have any academic concerns, please email them to mmolkosk@connect.carleton.ca. This is my connect email, and although I will be able to see who has sent the email, I will strip all identifying information to keep all comments completely confidential. Have a great month C-Eng, and congratulations on making it to second semester! If you have anything else you need to contact me about, I can be reached at academic@cses.carleton. ca or 613-520-3616



VP External

Kristen "Dorothy" Jerabek
- CIVE II -

Hey C-Eng! Glad to see you all survived fall semester. Hopefully you all had a relaxing break. Since the last issue of the IronTimes was published, I have represented Carleton at the Professional Engineers Ontario Student Conference in Ottawa, the National Conference on Women in Engineering in Hamilton, and the Canadian Federation of Engineering Students' Congress in Whitehorse. For anyone wondering why in the world anyone would host a conference in the Yukon in January, I'm wondering the same thing! I have to admit it was an amazing experience, though.

There isn't a lot coming up in my portfolio; half of it depends on when you are reading this. The First Year Integration Conference, run by the Engineering Student Societies' Council of Ontario and hosted in Hamilton, was held on January 20th-22nd. The only other event I'm in charge of is LAN#2. More details are forthcoming on that, so make sure to read the CSES Announce emails sent by our VP Internal! Have a classy New Year C-ENG!!!



VP Finance

Emily "Lap Jumper" Lemay
- BIOM III-

Hey C-Eng, its been a while since you have heard from me. Not too much has happened since the last issue of the Iron Times but here is a quick update.

Winter SGF is well under way, so if you are involved with an engineering group or a fourth year project this is a great opportunity to get some funding. Proposals are due by Friday February 3rd at 5:00 PM in the CSES office, so don't wait to long or it will be too late! :(There are a few changes to this semester's funding process so please read the funding request form carefully. Also, please make sure you fill out a Funding submission form and attach it to your proposal. Both the "funding request form" and "funding request submission form" can be found on the CSES website or picked up in the office (2090 Minto).

If you have any questions regarding SGF, feel free to drop by the office and talk to me or one of the other exec members.



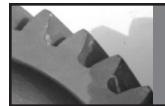
VP Services

Kristen "Hop Along" Van Den Tillaart - MECH V -

Hey C-eng,

So ...it has been a while since the last update. A lot has been happening. If you have been in Leo's lately, you will see that some things are still incomplete. All this will be completed over reading week. In the SGRC (Student Group Resource Center), storage is still being constructed. A new projector and screen funded by CUSEF will be installed by reading week. There have been a lot of changes to the office as well, including new stainless steel countertops. Midterm season is fast approaching; if you need a space to study, check out the SGRC's availability at http://sgrc.engsoc.org/. If you have any questions, feel free to contact me at services@cses.carleton.ca. Good luck!

News February 2012



NEWS



The Ice Ship Cometh

Gilles "Nightstalker" Messier
- AERO V -

Several of my previous articles have examined bizarre and often insane engineering projects born of Cold War paranoia. The Cold War, however, was not the only conflict to yield eccentric technical developments. Indeed, war has always been a major driver of technology, and WWII was no exception. In most cases, bizarre defence projects originate from desperate governments (eg. late-war Germany) willing to invest in any idea that might grant a strategic edge. In rare cases, however, an idea has gained traction through the ardent efforts of a single, passionate individual. Such was the case with Project Habakkuk, a strange effort to develop giant aircraft carriers made of ice.

In the early days of WWII, Allied shipping convoys suffered atrocious losses at the hands of German U-boats. At the time, land-based patrol aircraft lacked the range to reach the mid-Atlantic, leaving a "Black Gap" where shipping was particularly vulnerable. Though measures such as catapult-launched aircraft and makeshift aircraft carriers were deployed, these were only stop-gap measures. It was to solve this problem that project Habakkuk was conceived.

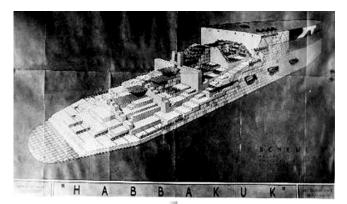
Habakkuk was the brainchild of Geoffrey Pyke (1893-1948), perhaps the epitome of the "Absent-Minded Professor" or "Boffin" archetype. An eccentric, out-of-the-box thinker with great disregard for the establishment, Pyke became well-known for his highly original but often unworkable weapons designs. One of his earlier schemes was a plan for attacking Nazi-occupied Norway, dubbed Operation Plough. To transport troops quickly across snow, he invented a strange vehicle based on the earlier Amstead Snow Tractor, which rode on a pair of horizontal, auger-like cylinders. When rotated by the engine, the cylinders dug into the snow and "screwed" the vehicle forward. This design was replaced by the more conventional M29 Weasel tracked vehicle before Operation Plough was cancelled altogether. Another of Pyke's plans involved transporting personnel from ship to shore or across swamps using a pipeline, with the troops riding in a capsule similar to the "pigs" used to clean oil pipelines. Unfortunately, Pyke failed to realize that building a pipeline required building a road first, mooting the utility of the concept. Due to the desperate nature of the U-boat situation, however, Pyke's Habakkuk concept (named after a biblical prophet) received considerably more support. His idea was to construct huge floating runways from ice to allow patrol aircraft to operate in the mid-Atlantic.

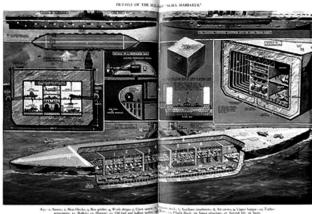
Initially, Pyke envisioned cutting these giant "floating islands" from natural ice floes and icebergs, making minimal use of strategic materials. Further research revealed, however, that such ice was too thin or unstable to accommodate large patrol aircraft. After much experimentation, Pyke developed a frozen mixture of wood pulp and water which he dubbed "Pykrete". As a composite material, Pykrete is much stronger and tougher than regular ice. In fact, its properties are comparable to regular concrete, rendering a Pykrete ship essentially bomb and torpedo-proof. Due to the insulating properties of wood pulp, Pykrete also melts more slowly than ice. It can also be machined and cast like metal and easily repaired in the field using seawater. Pyke gleefully promoted the merits of Pykrete – and Project Habakkuk – in his typical eccentric manner. While visiting Winston Churchill on one occasion, he was informed that the Prime Minister was in the bath. Pvke burst into the bathroom and dropped a Pykrete block into Churchill's tub to demonstrate its slow melting rate. Lord Louis Mountbatten, chief of Combined Operations and Pyke's employer, was equally enthusiastic: at the Quebec Conference in 1943, he placed a block of Pykrete and one of regular ice before the assembled delegates (including Churchill and Franklin Roosevelt). He then drew his service revolver and fired at both. The ice simply shattered, but the bullet fired at the Pykrete ricocheted and grazed an Admiral's leg!

Despite Pykrete's favourable properties, Project Habakkuk still faced major engineering challenges. Chief among these was the tendency for Pykrete to deform plastically or "creep" under load unless cooled to -16°C. Thus, a "Bergship" would require heavy insulation, a large refrigeration plant and an extensive system of cooling pipes. To test design concepts, refrigeration techniques and resistance to artillery, an 18-metre-long scale ship model was built on Lake Patricia, Alberta. The results of these tests were promising; indeed, it took three hot summers to completely melt the model! Eventually, a final design for the Habakkuk Bergship emerged: the craft would have a displacement of 2 million tons, be capable of carrying 150 fighters or light bombers, and be armed with 40 anti-aircraft gun turrets. As regular engines were too hot to be installed internally, deck-mounted steam generators would power external electrically-driven propellers as well as the hull cooling system. With Canada's vast supply of wood pulp at his disposal, Pyke planned to have a fullscale prototype Bergship ready for 1944.

Unfortunately, numerous factors contributed to the swift end of Project Habakkuk. First, the large quantity of steel required for the Bergship's reinforcement and cooling systems was sufficient to build an entire conventional aircraft carrier. The heavy ship would also have been impractically slow, unmaneuverable, and maintenance-intensive. Furthermore, by 1944 new long-range aircraft (such as the B-24 Liberator) had already closed the Black Gap, rendering the Bergship irrelevant.

Geoffrey Pyke continued to develop unique





and bizarre ideas throughout the war and beyond, but Project Habakkuk was the closest he came to actually implementing one of his schemes. After the war, the ridicule that Pyke's eccentricities attracted began to wear on him, eventually leading to his suicide in 1948. Despite the grandiose and often impractical nature of his ideas, Pyke was nonetheless one of the most original thinkers in the history of engineering, ardently refusing to be constrained by convention. Had he succeeded in actually building his Bergship, it very well might have ranked as one of the great (or at least the most unique) engineering achievements of the 20th century.

Survival Guide: Systems Student's Edition

Jamie "Invisible Man" Barresi - SYSC IV -

Normally you'll see people - usually 2nd years and up - stressing out about classes like Solids, Fluids, Thermo, Materials or really anything. Being in a minority of people who don't have to take those classes sometimes it can feel like you have no one to complain with or no one that will get it. Well I've been in those shoes so it was only fitting that someone should share some experience to get you through.

First things first, you're going to be taking classes in weird programming languages like assembly. It can be scary at first because you'll be thinking "ok this looks like tongues, how the heck is it useful for anything?" For the first little bit you're not going to understand it. If after a month you still don't get it, GO TALK TO YOUR PROF. I know they can seem scary but 9 times out of 10, if you ask them questions to help you understand the course material they will take the time to help you understand. Believe me when I say it helps and it will make you feel unbelievably good about yourself when you finally get it.

Another thing to look out for, you will have courses that have labs that will force you to use Linux. If you are completely green with Linux (like I was) this is going to seem freaky for a little bit. You'll hit a point

where you realize "hey this is all really cool and I can make Linux do some pretty funny things" you'll start enjoying it. Get really good with Linux, it looks great if you can walk into a job interview with experience using multiple platforms, especially Linux since in most cases companies get that environment for free.

You'll also be working on group projects before you hit your 4th year project. It may not always be with your friends. Sometimes your group members will be smarter than you, sometimes they will be on the same level as you and sometimes, well, they won't be the sharpest tools in the shed. In any of the cases you have to find a way to divide up tasks so that everyone is doing something and so everything doesn't fall squarely on your shoulders. In industry it's going to be the exact same way so learning to survive that early will give you a great set of skills if you have incompetent people on a project team.

This is all based on my experience so far; it may or may not end up being the same for anybody reading this. I think it's safe to say to all those people in other streams (you know who you are) that think they're the only ones with something to complain about, WE'VE GOT CRAP TO COMPLAIN ABOUT TOO!

News February 2012



IEEE SPAC 2012

(Student Professional Awareness Conference)

From Passion to Practice

Find your Co-op, Internship and Full time JOB!

IEEE Student Professional Awareness Conference (SPAC) is a formal dinner event that aims to bridge the gap between students and their career goals. SPAC offers students and employers a unique opportunity to network with each other in a professional environment along with professionals and academics representing the field of Engineering. Three guest speakers share their experiences with students to help in future career decisions.

Speakers this year are:

- Prof. Winnie Ye (Carleton University), Canada Research Chair in Nano-scale IC Design for Reliable Opto-Electronics and Sensors,
- David Boertjes, Phd, Technical Advisor at Ciena,
- Harley Finkelstein, CPO (Chief Platform Officer) of Shopify.

Companies that have been sponsoring SPAC in previous years include Ross Video, RIM, Canadian Forces, Alcatel Lucent, Ericsson, Microsoft, Espial, IBM, Code factory, Neptec, Ciena, Agilent and Department of National Defense.

WHEN: March 15th (Thursday)

WHERE: The Westin Ottawa (Downtown, next to Rideau Mall)

TIME: 6PM to 10:30PM

Tickets are available online at www.ieeespac.ca *OR* can be purchased at IEEE office (ME 4238). <<Discounts apply to IEEE members, LIMTED AMOUNT OF TICKETS>>>

Carleton Engineering Competition Results

Competition	First Place	Second Place	Third Place			
Junior Design	-Kendra Freeman -Matt Gambino -Reinis Kalnins -Brad Smith	-Marshall Dorin -Zach Fradette -Patrick Rutledge -Sam Worry	-Jasmine Edmond -Brandon Harkins -Alex Robertson -Stefan Sidorkiewicz			
Senior Design	-Bharat Bhaga -Jean-Philippe Caron -Matteo Loater -Jeremy Miller	-Andrew Campbell -Conrad Collins -David Kolkman -Ryan Kologinski	-Kevin Atkins -Brigitte Babin -Daniel Maguire -Max Turcotte-Novos- edlik			
Consulting Engineering	-Mel Blainey -Larissa Gross -Rob Stalker -Chris Weller	-Evan Heyes -Nolan Hunder -Thomas Lawrence -Gilles Messier				
Communications	-Gilles Messier	-Hugh Howie	-Nolan Hunder			
Parliamentary Debate	-Robbie Zuk -Trevor Irwin					

Nunanna Crepes

Jordan "Skitzo" Zawada - AERO III -

In a bowl-like container, combine:

- 1 cup flour
- 1 cup milk
- 1 egg
- 1 tsp salt1 tbsp melted butter

You will also need 1 bananna and Nutella.

Preheat a small sized frying pan with some food grade lubricant on it. Pour 1/4 of the batter onto the heated frying pan. Let one side get goldeny, and then flip it over.

While getting goldeny, cut up 1 bananna into 16 slices.

When the crepe is done cooking, slather Nutella onto the crepe and put 4 bananna slices on it, fold and enjoy heaven.

Repeat until batter is used up.

(You can also add whipped cream or icing sugar, or both)

Recipe from A 4* Restaurant: Pork and Apple Risotto

Caleigh "Paperbag Princess" Rutledge - ENVE III -

So I was recently in downtown toronto, and my family and I went to this amazing restaurant. For my own safety, the name of said restaurant will be kept hush hush, but it's a french name and has to do with apples. Unsurprisingly, my favourite item on the menu had apples in it. Introducing: Pork and Apple Risotto. Now, I have never made this dish, but I ate it. So I thereby feel that you should probably do it something like this:

Start your risotto plain, and conduct all usual risotto-making strategies. While the risotto is cooking, cut up some small slivers of apple - less than a quarter. Now peel the apple and de-core. Use another quarter for small chunks of apple. Throw these in the microwave until soft, but cooked. Use the rest of the apple (you should have just over half a de-cored, peeled apple) in a blender to make applesauce.

Now it's time to start your pork. Now, if you're cooking for 8 billion people, you can do a pork roast, which in this case, you've now waited way too long. Go back and do this step 3 hours earlier. But if it's just you, or two people, you can use pork chops or another cut (preferably one that is boneless). Season them up with your own preference of seasoning (I recommend Montreal Smoked Pork seasoning as well as tons of garlic, or if you're doing the roast, lipton onion soup mix and a LOT of water), and throw them on the frying pan.

Now. Take your applesauce and heat slowly with the risotto, til well mixed. Throw in the cooked apple chunks, cut your pork into tiny pieces, and throw them in as well. Now, you have an edible meal. But it's not pretty. So. Because I'm amazing, here's what you should do. Ladel out your risotto into a bowl, and place your slivers into the risotto in a circular fashion. Grate some gouda cheese overtop for a finishing sharp taste. Now you have an absolutely SICK meal. You're welcome. Impress that boy or girl of your dreams. This will work. I promise.

February 2012 News

Logic Puzzle

Matt "Soaker" Molkoski - AERO III -

- 1. In a street there are five houses, painted five different White house. colours.
- 2. In each house lives a person of different nationality
- 3. These five homeowners each drink a different kind of beverage, smoke a different brand of cigar and keep a different pet.

THE QUESTION: WHO OWNS THE FISH?

HINTS

- 1. The Brit lives in a red house.
- 2. The Swede keeps dogs as pets.
- 3. The Dane drinks tea.
- 4. The Green house is next to, and on the left of the drinks water.

- 5. The owner of the Green house drinks coffee.
- 6. The person who smokes Pall Mall rears birds.
- 7. The owner of the Yellow house smokes Dunhill.
- 8. The man living in the centre house drinks milk.
- 9. The Norwegian lives in the first house.
- 10. The man who smokes Blends lives next to the one who keeps cats.
- 11. The man who keeps horses lives next to the man who smokes Dunhill.
- 12. The man who smokes Blue Master drinks beer.
- 13. The German smokes Prince.
- 14. The Norwegian lives next to the blue house.
- 15. The man who smokes Blends has a neighbour who

Student Group Funding: For Those Lucky Enough To Not Have to Sit Through It

Jamie "Invisible Man" Barresi - SYSC IV -

Hey everyone! So Student Group Funding (SGF) for the fall has been divvied up and as usual, there are some people who are pissed off with how it got divided and think they should have gotten more, and so on and so forth. I can tell you from my time on Exec, ALL OF COUNCIL ABSOLUTELY HATES THESE MEETINGS! My reason isn't because it's long, nor is it because it causes plenty of arguments around the council table, but because 8 out of 10 times, I know people associated with the groups applying and I end up considering how they might feel based on the amount if they even get funding. We try our best to keep everyone happy and fund as much as we can, but something I don't think a lot of people realize is that CSES is not a bank of infinite money. So I figured I would write out some dos and don'ts of applying fo SGF. So without further ado, here they are, in a mess of messy thoughts:

1) Do Apply Every Round:

Regardless of whether or not you get funding, apply during every round of funding for SGF. We want to give you money if we can, and just because you apply once and don't get funded doesn't mean we never want to consider you again. For example if you are running an event and you apply for funding for something specific, you may not necessarily get the funding but if you have a deficit from running your event come the next round, apply again and we may be able to help fund some of it.

2) Apply for Definite And Relevant Expenses:

If a team or a club applies to us during SGF and says "we MIGHT be going to this conference and the delegate fees are \$XXX.XX" or "we might be going to this competition and the entry fees are \$XXX. XX/person" we tend to think that you aren't actually shy and apply.

going to go and you're just asking for money to ask for money. It's not something set in stone. We like to give you money when we know EXACTLY WHERE IT'S GOING TO BE SPENT. If you're banking on that funding to get into your competition, you're doing it wrong.

3) Don't Ask Us For Food:

If you're running an event (especially a free one) don't ask us to fund things like pizza or coffee or anything like that. We would rather help you pay for the things you DEFINITELY NEED for running your event like book costs, AV equipment, or something like

4) Be Reasonable:

Don't ask us to send 20 delegates from your group to a conference. If you're going to a competition, don't ask us to fund your hotel. We don't want to be accountable in the off chance that you break something. Also, when you get your allocation, happy with it or not, you need to realize that the decision is final. We will not review any decisions on any basis. If we were to examine one, we would have to reexamine all of them, and that's just bad news bears.

5) If You're A Research Project, APPLY:

Most research projects think that if they apply, they're going to get rejected. If you need to get a specialized piece of equipment or something like that, we'll likely fund it if it's reasonable (see the link to point #4).

Everything being said, hopefully everyone who has applied will apply again next semester and if you are a student group that hasn't applied yet, don't be

Maritime Cookbook: Lobster Rolls

Jordan "Crack" Briggs - ERTH V -

So one day you walk into your kitchen and come across a heap of freshly cooked lobster straight from the Bay of Chaleur... now what to do with it? You could always melt some butter and lay into 'er the old fashioned way, but why not be slightly fancier and more hand-food friendly, and make a good ol' lobster roll? Now as a piss-poor student you probably don't buy lobster too often, especially up here in Upper Canada, but back home where you get your seafood from the "fish guy" off the back of his half-ton it's a different story. Nevertheless, the wonders of modern supermarket chains have made lobster available year-round, and it doesn't hurt to splurge a bit every once in a while.

In case you were curious, the lobster roll is a pretty commonplace item to find at most restaurants and take-out shacks anywhere along the coast in the Maritimes and New England, a staple along with all your regular fare like hotdogs, poutines, and burgers. It's quick and simple to throw together and pretty damn tasty too; they've become pretty popular with both Maritimers and tourists alike during the summer months, and even McDicks' makes their own version, the "McLobster Roll". Though always the subject of debate, the best ones in my opinion tend to be found on the Acadian peninsula, though there's a dandy little seafood spot outside of Saint John's which is quite capable of making some good'uns, although fried clams is their main claim-to-fame. Either way, a lobster roll is a must have if you visit the east coast in the summer.

Flotsam aside, here's how to throw together a nice Maritime-style Lobster Roll for a little taste of seaside summer. You will need:

1lb. cooked Lobster meat (knuckle, claw, and tail meat is best for this)

3-4 tbsp. Mayo

pinch of pepper

1/2 stick melted butter (or Becel if yer right healthy) 6 to 8 hot dog rolls,

Preheat a fryin' pan to medium. Make sure your lobster meat (which was PRE-COOKED, that shit is important) is torn into bite size chunks. Now take your meat, mayo, and pepper, and throw 'em into a bowl and mix 'em all together until she looks about like something you'd use to bait your traps. Now you can set aside the lobster "salad" aside until you get your buns all nice n' toasty. Brush the sides of your buns with melted butter (or Becel), then toast on the fryin' pan until they're fried to your satisfaction. Remove the buns and fill'em up with desired amount of lobster salad. If you prefer, rolls can be lined with some fresh lettuce. Most enthusiasts prefer to skip that step though. Save the lettuce for the deer. If ya wanna be real fancy, you can add minced celery or cucumbers to your salad mixture. There ain't no real right or wrong way to do 'er, and pre'neer everyone and their grandma's got a different variation so do whatever tickles your taste buds best. For a hardcore variation: add bacon.

Note: Extensive studies have shown that lobster rolls pair well with a nice crisp lager beer. Moosehead or Alpine (which sadly isn't sold in Ontario) are strongly recommended.



Want more issues from the



Write or edit for us!

irontimes@cses.carleton.ca

News February 2012

CANDU

Gilles "Nightstalker" Messier - AERO V -

In 1987, the 100th anniversary of professional engineering in Canada, a special Centennial Committee released a list of the 10 greatest Canadian engineering achievements. 5th on the list, after familiar feats such as the Canadian Pacific Railway and the De Havilland Beaver, was the CANDU nuclear reactor. Often overlooked, the CANDU is one of the most innovative, efficient and safe reactors ever designed.

The CANDU (CANadian Deuterium-Uranium) reactor was developed by Atomic Energy Canada Limited (AECL) in the early 1960s. The reactor's unique design was born of limitations in Canada's technical and industrial capacity. While Canada possessed large Uranium stores, it lacked the ability to enrich them. Natural Uranium contains only 0.72% fissile Uranium-235 isotope; the remainder is Uranium-238, a neutron absorber. Water, the coolant in traditional reactors, also absorbs many neutrons. Uranium must thus be enriched to 3-4% U-235 to ensure sufficient neutron flux to sustain a chain reaction. In the early 60s, available enrichment methods were too resource-intensive for Canadian industry, forcing AECL engineers to develop a reactor which could burn raw, unenriched Uranium.

Their solution was to use heavy water (deuterium oxide) - water with its hydrogen replaced with Deuterium, a hydrogen isotope with an extra neutron in its nucleus - as the coolant and moderator. Heavy water absorbs 1000 times fewer neutrons than light (ordinary) water, allowing unenriched uranium to sustain a chain reaction. CANDU fuel consists of small pellets of Uranium Oxide bound into cylindrical fuel "bundles" made of zircalloy, a neutron-transparent zirconium alloy. CANDUs can burn almost any kind of nuclear fuel, including Thorium and Plutonium (from decommissioned nuclear warheads). CANDUs can even burn spent fuel from conventional light water reactors (LWR), extracting up to 30% more energy (spent LWR fuel contains ~0.9% U-235, rich compared to the 0.72% the CANDU was designed to burn).

The second challenge facing the CANDU's designers was the inability of Canadian industry to manufacture large pressure vessels. Unlike traditional reactors, in which the fuel rods are suspended vertically in a single large vessel, CANDUs feature a unique "Calandria" architecture. Fuel bundles are contained in multiple "Calandria Tubes" running horizontally through a large Calandria drum filled with heavy water. The Calandria tubes can withstand high pressures and are easier to manufacture than a large pressure vessel. Heavy water coolant is circulated through annular channels in each tube, insulating the moderator from the hot fuel and limiting the temperature and pressure in the Calandria. The greatest advantage of the Calandria design, however, is on-power refueling. When fuel is depleted in a regular reactor, the reactor must be shut down, opened and the fuel replaced. This can take a reactor offline for weeks, greatly reducing its productivity. Uniquely among reactors, CANDUs can be refueled while still running. A robotic refueling machine on either side of the reactor adds or removes fuel bundles from the horizontal Calandria tubes. This feature makes CANDUs extremely cost-effective to operate. Power plants are rated by their capacity factor: actual output divided by theoretical output if operated continuously. Most reactors have capacity factors of ~60%; CANDUs can reach 80% or higher.

CANDU reactors are also among the safest ever designed. Their inherent safety stems from their ability to burn unenriched uranium. Sustaining a chain reaction in such poor fuel requires extremely precise alignment of the fuel channels; thus if the reactor overheats the channels will sag and break alignment, halting the reaction. Heavy water will absorb a large amount of heat without boiling should the cooling systems fail. In addition to these natural safety features, CANDU installations also feature emergency cooling pumps, neutron-absorbing shutoff systems and vacuum buildings to quench steam explosions. In 50 years of operation, no CANDU has suffered a serious failure.

The CANDU design has one major disad-

vantage: cost. Heavy water is expensive (~\$300/kg), composing 23% of the cost of building a CANDU. Construction itself makes up 60% of a CANDU's total operational cost; thus they require a greater initial investment than most reactors. Indeed, almost all CANDU units have run over budget by an average of 150%. However, design features such as on-power refueling make CANDUs more cost-effective in the long run, and currently 29 units are operational in Canada and other nations such as South Korea, Romania and Argentina. Despite the economic issues, from an engineering standpoint the CANDU remains a unique, ingenious design and one of the greatest achievements in Canadian history.

SIDEBAR: Nuclear Reactors for Dummies

Nuclear reactors work by harnessing nuclear fission, the splitting of atomic nuclei with neutrons. When a nucleus splits - or "fissions" - it releases energy and one or more free neutrons. These neutrons can themselves fission other nuclei, creating a self-sustaining nuclear chain reaction. Uranium 235, the element most commonly used in reactors, is most easily fissioned by "thermal" neutrons with energies around 0.025 Electron Volts (eV). When fissioned, however, U-235 releases "fast" neutrons of 1eV+. To sustain a chain reaction, these neutrons must be slowed down. This is accomplished by placing a "moderator" between the fuel elements. In modern reactors, light or heavy water doubles as the moderator and coolant. To control the reaction, neutron-absorbing control rods are raised and lowered into the reactor core to moderate the neutron flux.

In a nuclear power plant, coolant is circulated through the reactor core to absorb the heat of the reaction. This is passed through a heat exchanger to generate steam, which drives turbines and electrical generators. The steam is then cooled with a cooling pond or cooling towers and returned to the heat exchanger, completing the cycle.

The Software Of Engineering

Evan Heyes - MECH V -

Good day to all my fellow Mechs... and Aeros... I guess. This article is written in part to assuage the dearth of articles lamented about in the last Iron Times and to spread some light on software which has helped me immensely in my time here, some you will know, some you may not. So without further ado.

Microsoft Office:

For the love of all that is good and holy do not buy this! There are tens of other pieces of software out there which do the same job, for free to name a few (Lotus Symphony, Open Office, Libre Office, Neo Office). A bright 15 year old programmer can make a clone of Wordpad, which is honestly most of the functionality you will find yourself needing. If you need to do anything more complex, have an honest look at LaTeX. What else do you expect me to say. You hit some buttons and words appear on the screen, for those of us stuck in the 2003 days the new interface is clumsy and unintuitive. And that is all you will have from me on this waste of money. It should also be noted that all engineering students can download all microsoft office software for free from the CCS website.

MATLAB:

Walk into any computer lab running a ECOR 2606 lab and you will hear if you listen closely the curses of people trying desperately to get this program

to do what they want. A less intuitive language has yet to be invented. Now that being said, this is the engineer's hammer, if you think finesse is for arts students, and you need to solve a problem there are few ways to do it faster than MATLAB. That being said waiting for this thing to boot is like waiting for an iceberg to melt.

Maple:

Haven't used it since ECOR 1010, and I want the 24 hrs I spent learning it back. That is all.

Intelli/Auto(CAD):

I'm not entirely sure where the recent hate is coming from on these programs, they are great (If used sensibly). There is nothing better for throwing together a simple sketch of an idea after the paper phase of design. Modifications are quick and easy, and when you are done modeling it in solid 3D form is a breeze.

Pro/Engineer:

Oh how I hate this program! It does wonderful things but it feels like a bloody boxing match to get it to do what you want. It tries to be helpful, much like a family dog, which fills each slipper with drool before bringing it right to you. Now that being said getting thus far in engineering would have been a nightmare without this program. 3D models are beyond compare

when you don't feel like looking like a doofus after manufacturing a design which doesn't work in the way you planned. Learn the quirks of this program and have a good cup of your favourite calming beverage at hand to help with the pugilist contest and this will be your best friend.

LaTeX

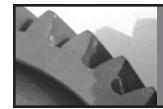
If writing equations in a lab report is a pain, or if you have ever wanted to add a section to a report and found yourself spending time changing the section numbers on a 10 page report then this will be a god-send. A somewhat unintuitive program, but when you learn the syntax, which is honestly closer to C than one would think. You will find that the program gives far more than it takes. Section and equation numbers are automatic, everything is always formatted nicely, and although you occasionally have to wrestle with the position of photos and graphs, the end result always looks very professional and of a very high quality.

Have a look, it was the best investment in time I ever made, and the best part is that it is free.

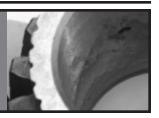
C(++)

If MATLAB is the engineers hammer then this is the engineer's rock, more time consuming than MATLAB, but also more available and easier to get a hold of. There is very little MATLAB can do that C(++) cannot. However that being said this takes much more effort to write if you are doing a complex program. Now that being said if you need to do a few hundred linear interpolations for a certain Thermo Lab, then a couple of lines here, a loop, and your done.

Gallery February 2012



GALLERY



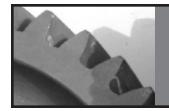


Gallery February 2012

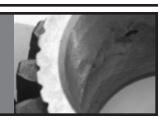


I should be updating my resume right now.

Entertainment February 2012

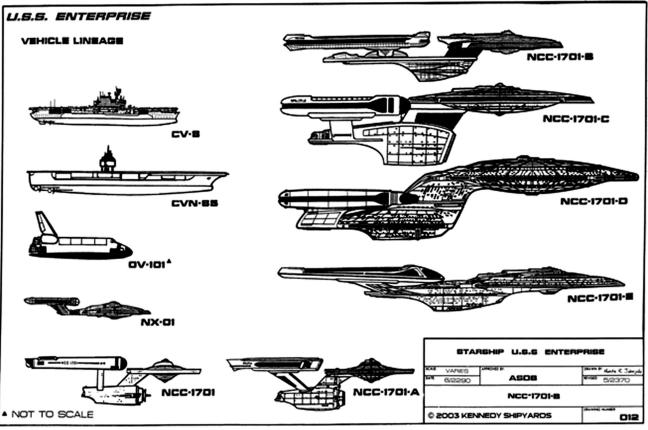


ENTERTAINMENT



Why Real Spaceships Will Be Ugly Boxes

Trevor "Deepthroat" Irwin - MECH III -



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"Space: the final frontier. These are the voyages of the Starship Enterprise. Its continuing mission: to explore strange new worlds, to seek out new life and new civilizations. To boldly go where no one has gone before." These iconic words stirred the imaginations of a generation, filling their minds with a vast expanse of stars waiting to be colonized and explored. Unfortunately their dreams will probably be far from reality. Take the USS Enterprise: it is a very pretty - but unfortunately completely impractical - design. The thrust from the nacelles is not directed along the ship's line of symmetry (except, possibly, in the Enterprise "D"), meaning the ship will tumble endover-end unless corrective counter-thrust is applied. This is extremely inefficient, requiring extra equipment and consuming extra fuel. And before you start thinking "they have cool gadgets like inertial dampeners; I'm sure they correct this!", remember this: you cannot cheat inertia.

Which brings me to my next point, or rather two points: specifically A and B and how to get from one to the other. There are countless examples of faster-thanlight travel in science fiction: hyperspace in Star Wars, warp drives in Star Trek, the wormhole system in Stargate and the jump drive in Battlestar Galactica to name a few. News flash! Unless CERN (European Centre for Nuclear Research) has actually discovered otherwise, NOTHING can travel faster than light. Now I understand that all the above examples work by entering another plane or dimen-

sion of space where distances are shorter -essentially, you rip a "hole" in space and enter it like Tiger Woods. If this were possible, however, Hiroshima and Nagasaki would have been sucked into another dimension. And even if we could reach at least light speed, travel time between stars would still be measured in years. Even communications - carried on radio waves traveling at light speed - would take years. Interplanetary relations would be impractical to maintain, meaning no Federation of Planets, no Human Empire. At best we could establish a few self-sustaining outposts.

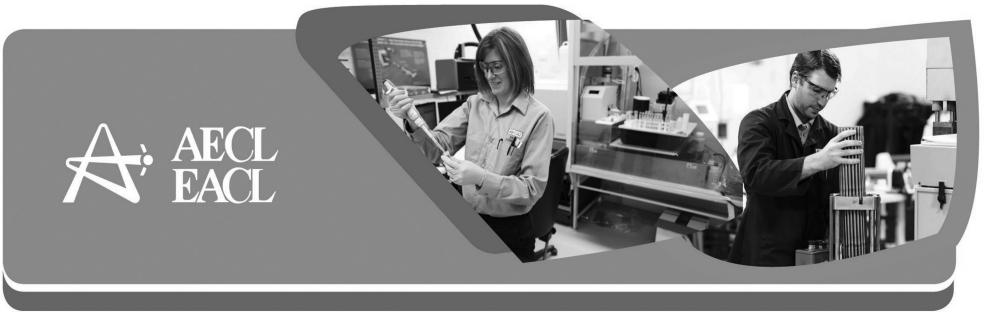
So let us assume that it is possible to rip a "hole" in space, masterfully enter it and sail boldly into the unknown. There is still one small problem: acceleration. Neither we nor most sci-fi spaceships withstand large accelerations. The average human begins passing out at 9G of constant acceleration and will die shortly thereafter, limiting the maximum acceleration of any vessel to approximately 88 meters per second squared. However, this is only an absolute maximum; in reality, ships would travel much slower for safety reasons. The effects of high, prolonged acceleration on human bodies have not yet been fully documented. Also, at high speeds collisions from micrometeors and other debris becomes a real danger.

Another design flaw of the Enterprise's nacelles is their mounting system. High accelerations require a large amount of thrust, yet the Enterprise's engines are mounted on spindly pillars. I don't care how ultrafuturistic the nano-steel you use is; only a fool sticks the engines on the weakest part of the ship. The best solution is to mount your engines at the rear of the vessel. Hence the box ship.

Okay, so let us assume we can reach a new star system in a reasonable amount of time and that our bodies and ships survive the trip. We prepare to land and build a new home only to find the planet a ball of ice. Oops! It turns out that habitable planets belong to a far more exclusive club then we might think. For one it must occupy a narrow region around a star known as the Goldilocks Zone, which is neither too cold nor too hot for the presence of liquid water. Also the star must be of approximate output as our own sun (I personally don't enjoy my skin peeling off because of gamma rays). Assuming we find such a planet, our task is done, right? WRONG! It is highly unlikely that any new planet's biochemistry will be the least bit compatible with our own. At best, our two biochemistries simply cannot function together, forcing us to kill every living organism and re-seed with earth flora and fauna. At worst, we all die of a disease to which we have no immunity.

So now that I have completely crushed everyone's hopes and dreams, I should state that I personally believe we will one day conquer the stars. But first a miracle needs to happen.

Entertainment February 2012



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February 2012 **Entertainment**

Guide to an Awesome Ski Trip

Joel Gauthier - ELEC I -



November is the only time of year when you can truly complain that there is nothing to do. Let's face it: the sun is gone, it rains, it's cold and it's nearly impossible to do anything outside without boogersicles forming in your nostrils. At this point, most Canadians are just starting to store their bicycles and bring out their skis and snowboards. Despite the lack of snow, however, November is still an exciting time for people anxiously waiting to hit the ski hills! As a local, I have visited most of the ski resorts in the area and must say we are lucky to have a wide variety of destinations reasonably close to campus. Here are a few of the hills I recommend:

In Ontario

Calabogie Peaks Resort Distance: 108 km (West)

With 20 trails and 2 lifts, Calabogie peaks is one of the most relaxed hills I've been to. You'll enjoy the nice atmosphere and well-maintained trails.

Mount Pakenham Distance: 59 km (West)

I've actually never been to this hill. I've included it on this list because it is very close to Ottawa and is apparently a nice spot for beginners. If you try it out, please let me know what you think.

In Quebec

Camp-Fortune Distance: 28 km (North)

This is easily the closest hill to campus. It has a nice variety of trails and is beginner-friendly. Very cheap lift tickets too.

Edelwiess Distance: 42 km (North)

Owned by MSSI (Mont-Saint-Sauveur), this resort has a similar ambiance to its sister hill but fewer trails. If you're a park rat, this is the best spot in the Ottawa region. It is very popular, however, so expect lots of people. Key words: cheap Tuesdays and 2 for 1 weekend evenings.

Mont-Blanc Distance: 167 km (Northeast)

trails and super-friendly atmosphere. The best part is the sugar shack at the top of the hill. A must try!

Mont-Cascade Distance: 36 km (North)

Many people love this place. I have mixed feelings as it is more a hill for intermediate skiers.

Morin-Heights Ski Resort (Northeast) Distance: 179 km

I make sure to come here once every year, particularly for the "Pond Crossing" event. Basically, they dig a large hole and fill it with water; your objective is to speed down the hill and cross the pond. It's very amusing to watch people fall in freezing water at high

Mont-Olympia Distance: 194 km (Northeast)

Mont-Olympia is also owned by MSSI. It's 5

km from Mont-Saint-Sauveur, so if you're in the area and looking for a quiet spot to learn skiing, this is it.

Mont-Rigaud Distance: 135 km (East)

If you are a newb, go to Rigaud. You will enjoy the newb-friendly environment and won't feel like a newb because everyone else on the hill is a newb too. A great spot for learners.

Mont-Saint-Sauveur AND Mont-Avila Distance: 169 km (Northeast)

This is my favourite destination. Not only do you get 2 hills in one, but Avila is the biggest snow park in Quebec with 50 trails and 11 lifts. If you want to hit the trails after school, this is the best night skiing in the region. Also, the town of Saint-Sauveur has a great nightlife. When heading home, be sure to stop at the McDonalds off Highway 15 because IT IS THE BIGGEST SCRAWNY RONNIES YOU WILL SEE UNTIL YOU CROSS THE BORDER!

Mont-Tremblant (Northeast) Distance: 169 km

Words can't describe how awesome this place is: 95 trails, 12 lifts (including 2 gondolas), 5 skill parks, 875 meter-elevation, 5 bars and plenty of BEA-VER TAILS (OM NOM NOM NOM). The village is at the base of the hill, so you can ski right through to the parking lot. Tremblant has so much to offer that you'd be a fool not to go at least once this winter. Just Google this place and look at the pictures. The only reason this is not my top pick is the lack of night skiing. Also: if you are new to skiing, DON'T GO on Zig-Zag, Vertige or Dynamite. People die on those trails.

Everything else you need to know

If you don't have any equipment, the average cost of renting is \$60 for the day (includes: ski or board, boots, helmet, poles). Prices for lift tickets vary depending on how long you plan to ski, if it's a weekday or weekend, if you're a senior, etc; in general, expect to pay between \$15 and \$45 (Tremblant being the exception at \$60-\$75). Don't forget your snow pants (if you value your balls) and wear your friggin' goggles or the cold wind in your face will make you cry. Bring your own lunch because the caf food is overpriced. Keep an extra pair of socks in your jacket. Finally, NEVER leave stuff unlocked; a friend of mine had his shoes and lunch box stolen last year.

Tips

Honestly, it doesn't matter if you've skied or I love this place for its awesome variety of not before; don't be afraid to try. It's so much fun and you'll probably remember the experience for the rest of your life. I recommend joining the CU Ski and Snowboard Club because they go to Mont-Tremblant every Sunday during winter. It's a good opportunity to make friends and learn from experienced riders. If someone offers you a ride to the hill, gas money is always appreciated (gives you better chance of being re-invited too). If you go anywhere in Quebec, do yourself a favour and stop at LA BELLE PROVINCE restaurant. Finally, please be careful if you choose to smoke illegal substances in the gondolas. Depending on the substance, you could find yourself stuck in a tree or pretending to go fast on a flat surface while making funny noises. I'm not speaking from personal experience, of course...

Things I heard At The Fall GM

Nolan "Pi" Hunder - AERO V -

"Mr. President, you haven't done anything."

"Sausage delegation to NCWIE"

"Open your throat."

"Do you love her long time to death?"

"How hot are the other delegates?"

"If you're going for the girls, you'll be disappointed."

"We can't call them SREEtards after they get accredited."

"Caleigh, talk slowly."

"Kristen, and by Kristen I mean Jamie"

"I have no idea what is on my slides"

"One of the chicks, talk"

Things Clarified At The Fall GM

Nolan "Pi" Hunder - AERO V -

No one can't hear Matt

Matt needs directors.

Matt likes jumping.

Kristen stole super cow

All non-shaving options are valid for Movember

CMAS needs to give a councillor.

Caleigh is sure girls like to write

Kristen doesn't want to be quiet

Erik invested a lot of hard work to become this sexy.

Jamie reminded us it's a CSES event, not a flightsuit event

Robbie tried to explain how magnets work, but was silenced.

Eric is never running for first year rep again.

Computer Systems rep is comfortable with anything.

Andrew Campbell can't spell Therron

Sarah with an h is the "right" way to spell it.

Rob Stalker's been there and done that.

Transcrepency is the same word as transparency

Andrew Campbell is good with big words

CFES has a completely unofficial pranking code displayed on their website.

The Hammer, it happened again.

Author's Note: Your fearless editor stepped up to take on the role of becoming the Mechanical and Aerospace Society Rep.

February 2012 **Entertainment**

Unofficial Iron Times endorsed CUSA Slate

I Can Haz Vote?



Free Pokemon Cards! 50% Less Snow! Fewer Off-White Walls! More Cement In Tunnels! 50% More Snow! Octagon In Quad!

Professor Dog For CUSA President

I Can Haz Vote?



So Cuuuuute, how can you not just love him? Free Pokemon Cards! Will End Tail-Chasing! No More Begging! Electrical Outlets On Ceilings!

Wet Little Puppy For CUSA VP Internal

I Can Haz Vote?



Better Money Management!

Will Move All Funds to Swiss Bank Account!

Free Pokemon Cards!

2X More O-Trains!

Very Responsible!

Tiny Hedgehog **CUSA VP Finance**

I Can Haz Vote?

Hairball-Support Center! No More Laser Pointers! More Can Openers! Catnip Support Center! Free Pokemon Cards!



Adorable Kitten For VP Student Issues

I Can Haz Vote?

Free Pokemon Cards Faster Response Times More High Branches for Napping! CU-Wireless In Every Home!



Hilarious Sloth For CUSA VP Services

Can Haz Vote?



Standing Up For You!

Free Pokemon Cards!

Small Chairs for Smaller Students

Clocks with Fewer Hands!

Big Ears Mean Better Listening- To You!

Lovable Tall Bunny For VP Student Life

The Ups, Downs and Sideways of 4th Year Project

Marc "Todd" Strummer - AERO VIII -

For many of us, 4th year project is what our schooling has been building up to prior to graduating and getting a job. And what an experience it has been thus far.

Day 1: We're gonna do great, the 5 past years have accomplished nothing but this year it's going to work.

Day 2: Hmm this is a lot of papers...

Slightly later on Day 2: hmm this reading may take more than a few hours.

Day 7: WHY IS THE READING NOT DONE YET!

Day 9: What the hell is a Molex Connector?

Day 12: Hmmm shouldn't I actually be building something now? It seems like I've done a lot of reading. Like seriously, this is longer than the Engine Start Manual for the F-15.

Day 13: someone left this room awfully messy

later on Day 13: there we go, the room is all cleaned Day 25: How can I do this with midterms?

and ready to go.

Day 14; I just cleaned this WHY!??!?!?!?!?!?!?!?!?!?!? Day 15: Why is there no electrical tape, a project this size should have a whole box of different colours of electrical tape

Day 16: How do I get my money back for buying \$50 of electrical tape?

Day 19: We need a time line? Hmmmm well let's aim for the first test by the end of the month... Oh that's only 20 days away, yeah we'll be fine

Day 21: I so should not have told them to have that test so soon

Day 24: Hmm this initial assembly was a bad idea, this thing definitely looks like it's going to fall apart

Day 24 and three minutes later: Where are the bolts? There should be three more. No not the short ones.

Day 26: By failing my midterms, gotcha.

Day 27: Now that I have some time I should get back in the lab.

5 minutes later: And there's no power in the lab room,

Day 29: "Hey can you have that report done by tomorrow?" Report? Fuck.

Day 30: "Hey do you know...." it's in the report. "What

Day 31: "So we're testing next weekend..." Next weekend as in two days? "Yeah have your test plan done" Test plan?

Day 32: So there's another midterm gone, and test plan

Present Day: I should be getting that logbook sorted out but I wrote this article instead...wonderful.

Entertainment February 2012

Entry To McKenzie

Evan Heyes - MECH V -

So it is the weekend, midnight, or whenever you prefer to do your studying. You decide you need MATLAB, or some other form of software you don't own, or simply a quiet place, to do your late night work. A relatively common occurance. Let me illustrate how this will end - though most people already will know the story.

You will approach Mackenzie - either from the tunnels or after trudging through the snow - naturally expecting an unlocked door. Next, however, you will hear one of two things: a click (indicating the door is locked) or a smash as you nose impacts the locked door (both have happened to me repeatedly). Being a persistent student, you refuse to find another study spot and proceed to try another door - with similar results. Five or six doors later, you finally get through and start studying. If you are particularly "lucky", the maintenance staff will have locked the internal doors to the individual blocks or - for extra giggles - lock one door and leave the one next to it unlocked (don't ask me why. I haven't a clue).

The next night however is when the fun begins, for being a smart engineer you arrive at the same door which was open to you the night previous. And lo and behold, they have locked it. Now someone with a worse temperment than I might have a inclination to give the door a good swift kick. I advise against this for glass is brittle and does not respond well to impact. The same process of the previous night is repeated, to the same result, eventual entry into Mackenzie. With perhaps a slight bit more frustration than before.

Can someone somewhere please tell me the point of this game? I know of several incidents of broken glass at Mackenzie, and one near broken nose. To what end? There is always someone in this building. Safety may well be a concern, but locking half the doors does not accomplish much of anything, and locking all the doors isn't going to work either. Are they afraid someone is going to walk out with a wind tunnel, at midnight, during the snow?

For those of you wishing to steal my precious study space here are the doors I have found most successful:

Parking Lot: Mackenzie's parking lot doors on both sides are either unlocked frequently or propped open by other students, usually a prime use for a Charlatan here, as they are handy.

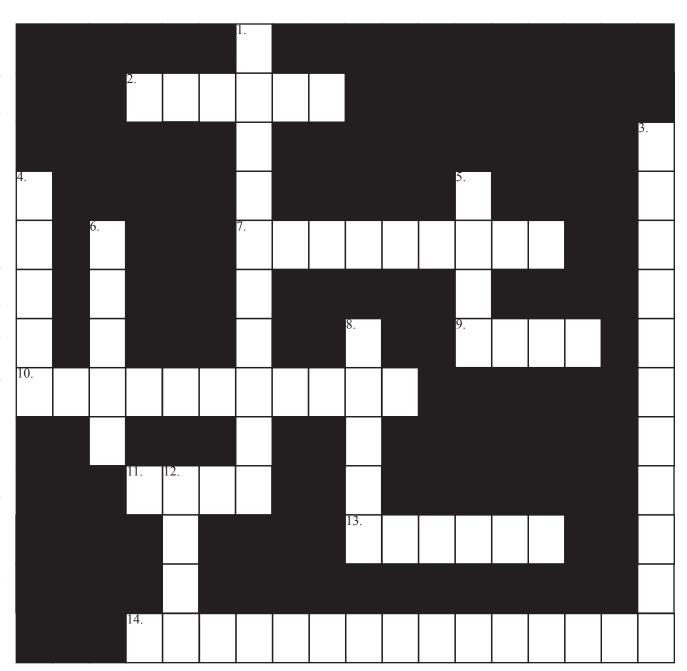
4th Block stairwell: Almost always unlocked, I am not sure they do lock. That being said they are somewhat out of the way.

Mackenzie Quad: All of these are hit and miss, but they can be tried in rapid succession.

Minto: Don't bother they always lock these doors. Though the connection doors are always the opposite. More fuel for my speculation that this is an elaborate game for which we are the rats.



Iron Times Crossword



Across clues

- 2. The not so quiet quiet place.
- 7. Vehicles not just for Earth.
- 9. 3397 ME.
- 10. Our 2012 C-Eng Musical.
- 11. The Canadian Level of us.
- 13. All my clothes turned _____ during frosh.
- 14. Known for the cheapest food on campus.

Down clues

- 1. Alumni group affiliated with bridges.
- 3. CUSA Slate.
- 4. Terrifying races.
- 5. The actually quiet quiet place.
- 6. The Ontario Level of us.
- 8. Alumni group with a namesake drink.
- 12. You've got a fast car...

WTF of The Month



This issue's WTF of the month is a little bit special as it is actually a set of instructions. Specifically, these instructions tell you how to replace the index finger on your left hand with a foam finger. Why anyone would think this is a good idea, I don't know; then again, I've never been drunk. The text version of these instructions, as interpreted by me, would be:

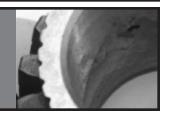
- 1. Take your left hand.
- 2. Remove index finger using a pair of scissors.
- 3. Remove the index finger on a comparably sized foam hand with the same pair of scissors.
- 4. Sew the recently removed foam finger onto your left hand where your index finger used to be.
- 5. You now have a foam index finger on your hand.

I think these instructions need some improvement, however. As shown in the picture, they are printed on the bottom of a snowboard, the part never seen while it's being ridden. The instructions also aren't very helpful. The above can be broken down to: remove finger, cut off foam finger, and attach foam finger. It offers no advice on removing a finger with scissors (a surprisingly difficult task). I suppose I shouldn't be expecting much from the makers of this sign, at least not until their education has advanced sufficienty for them to spell anesthesia.

Comics & Art February 2012



COMICS & ART



Wasted Talent

www.wastedtalent.ca











Abstruse Goose

www.abstrusegoose.com

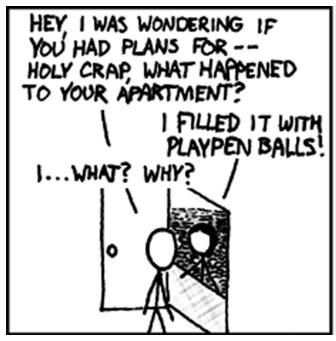


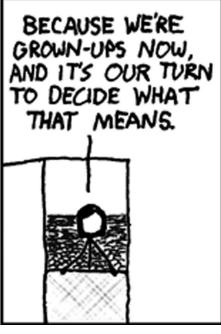


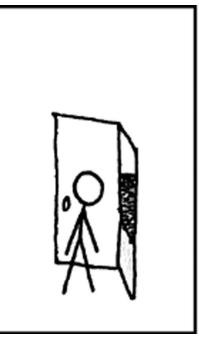


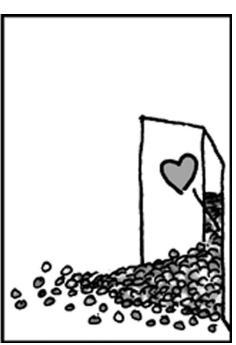


xkcd www.xkcd.com

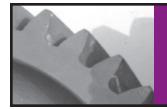








February 2012 **Last Words**



LAST WORDS



Uses For The Charlatan

- Lay some on the carpet if you don't have anywhere to put your snow covered boots
- Wrap around the bottom of candles so they fit the holders better and partially contain the dripping wax.
- Place some underneath a wobbling chair leg to stop it from wobbling.
- Picking up dog poop.
- Place underneath heavy objects on counter tops to stop them from being scratched.
- Emergency torches
- Makeshift sun shade as spectator events.
- Shred and stuff in vases to help support fresh
- Put under car wheels when stuck in snow, mud or sand
- Line waste baskets.
- You can read it

Sleeper of the Month



This month's sleeper goes to Peter Toonders as representative for all the CMAS sleepers resting during exam season. This CMAS couch has been the site of many tired engineers resting between classes. During the two weeks leading up to exam time, everyone has a bunch of assignments due making going home to sleep quite impractical when there are lovely couches right here on campus.

* Sleeper of the month is entirely consensual and submission based. All people appearing in this section have given prior consent and have been informed in advance that their picture will appear here.

FEEDBACK LOOP

for statement = 1 to n

Q: Which fruit tried to conquer the world?

next statement

A: Alexander the Grape!

next statement

One year after graduation I'm noticing that I can't stomache samosas everyday.

next statement

Also, I can kill you with my brain.

next statement

Foking Prawns, man!

next statement

I got lost in Arch once, took me a week to get out.

next statement

Wings!? Wings and Beer!? CHeap!? WHAT DID YOU SAY CHEAP!? Wings! Wings and Beer

next statement

The 111 bus gets its route number from the number of minutes one must wait in the fucking cold before being able to catch one.

next statement

Researchers at the State University of New York have determined the following from a recent study: Women are addicted to semen. I kid you

end

Want to say something? Post to the loop at: irontimes.engsoc.org

Upcoming Events - February

								1		2		3		4	
								lmbo	olc	Groundhog Day		OEC Begins		World Cancer Day	
	5	Ottawa	6			7		8		9		10		11	
ľ	U Hockey Game		Waitangi Day				Begins		R-7 Semyor- ka becomes operational		ENVY		Steamboat is first pat- ented		
	12		13			14		15		16		17		18	
	Darwin Day		Lupercalia		V-Day Pub		Flag Day		Launch of Explorer 9		Giordano Bruno is burned alive		Discovery of Pluto		
	19		20			21		22		23		24		25	
	Laur of M Spac		Day Just			ı	ner Lan- ge Day D I	Cele Day N	ebrity G	ı	r Dart Flight R E		Times cles Due K		Revolv- atented
	26		27			28		29							
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