

October 2011

# Iron Times

The Official Publication of the Carleton Student Engineering Society

## BRIEFS

### Epic Guide To Getting Work Done

So you've just finished your seventh hour of calculus and you have a few hours to kill between classes. For whatever reason you're stuck on campus, you're going to need a place to get stuff done.

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### CUSA Rep Story

Considering the seemingly infinite uses for the Charlatan, it would not surprise me if some of you have glanced at an issue at some point this past summer. If you did, you likely saw vague yet dire warnings of trouble brewing within CUSA. Or maybe you make party hats.

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### How To Attend Parties

Some of you may recall that I wrote an article last year on how to return home from a party. Based on the few times I've been out this year, and what I've seen, I've decided to write this article including fundraiser, BYO, and Competition parties.

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### November

During November each year, November is responsible for the sprouting of moustaches on thousands of men's faces, in Canada and around the world. With their "Mo's", these men raise vital funds and awareness for men's health, specifically prostate cancer.

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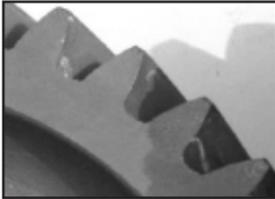
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# Something, Something, Engfrosh



**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.



# EDITORIALS



## Epic Guide to Getting Work Done on Campus

Curtis Lambert  
- CIVE IV -

So you've just finished your seventh hour of calculus and you have a few hours to kill between classes. For whatever reason you're stuck on campus, and whether you're looking for a quiet place to cry about your education choices, play some Harry Potter on your laptop, or maybe even try to get some work done, you're going to need a place to do it. Luckily, I have compiled a 100% accurate, impartial, non-arbitrary guide to help you pick the perfect spot, with super-duper handy  $\pi$  ratings out of 5. (Disclaimer: This guide is completely arbitrary and I take no responsibility for how good or bad these locations actually are.)  
*Editor's Note: We don't take any responsibility either.*

### Mackenzie Building $\pi \pi \pi \pi$

The 'labyrinth' - as I like to call it - was designed principally to trap lost first-year artsies, with little consideration given for public work space. There are some prime tables at the top of the stairwell outside the electronics department, but those are hard to get during the day and usually loud. Of course, there is also Leo's, which is easily the best and cheapest place to buy drinks and snacks around campus and has a few tables available if you're not too concerned about noise. The best place in this building for work, however, is McCoy's study lounge, which is open twenty-four seven and boasts comfy chairs - even if the wi-fi is sketchy.

### Architecture Building $\pi \pi$

I can't really give this building a fair rating due to my hardly ever being in it (mostly because I don't want to disturb the Architecture students passed out in the halls). From what I understand, this building - which is always interesting to walk through - is their equivalent of Mackenzie.

### Herzberg Laboratories $\pi \pi \pi \pi$

This building is pretty good for getting serious work done as it has a fair number of public tables and has a very quiet, somewhat depressed atmosphere. When I have a heavy workload day and want to feel better, I come here and eavesdrop on physics masters students arguing over quantum mechanics; suddenly, summing all forces to zero doesn't seem so bad.

### Athletics $\pi \pi$

Not a great place to get serious work done, but it is the only building in that section of campus with tables. Plus, you can easily grab some Timmies.

### University Centre: $\pi$

Don't do work in this building. Sure, there are tables and seats in a few areas, but they're only good for chilling with friends while you try to chew what Pizza Pizza calls food, (but is really cardboard with tomato sauce and cheese. This building is only really useful for buying Subway and Timmies or downing a pint (or five) at Oliver's and Mike's Place. Plus, CUSA is in there. Gross.

### Azrieli Theatre $\pi \pi \pi$

They just added a lot of tables to this (fairly quiet) building, making it easy to find a seat while classes are running. However, be warned: as classes are being let in and out, this building might as well be a circus. You won't be able to move as people stampede past.

### Dunton Tower $\pi$

I've gone exploring in this building a few times and never really found any tables or seats available. It's just really tall (completely unrelated note: If someone dares you to run up and down the stairwell because it's awesome, they're lying).

### Loeb Building $\pi \pi \pi \pi \pi$

I really like this building, which pretty much has everything. There's the café in the basement and loads of public seating and tables on the second floor, which always stay tolerably quiet. The wi-fi is fast, and if you aren't looking to get any work done, the comfy benches at the third floor tower entrances offer a continuous flow of very attractive artsies (not that that matters...).

### MacOdrum Library $\pi \pi \pi \pi \pi$

If you want to get serious work done, hands down this is the place to do it. I'm partial to the basement for some reason, but this large building is devoted to public work space with private tables and very comfy roller chairs (no more of those hard fixed steel chairs). During exam time, it often stays open all day and night. Good luck finding a seat, though, because somehow even this building fills up with stressed-out students trying to hit that magical 50%. The one downfall is they're pretty touchy about bringing food or drinks in, and talking loudly doesn't go over very well. There is a small café at the entrance, but I've always found it a little overpriced and pretentious.

### Paterson Hall $\pi \pi$

This building has some public tables on the first floor, but I've never been crazy about it for some reason (possibly because my CCDP prof's office is there).

### Southam Hall $\pi \pi$

Until recently, this building was terrible for doing homework due to the constant flood of loud people, lack of tables, long stair climbs, and terrible wi-fi signals. However, the addition of an elevator and tables to upper floors have made it better. However if you or a small group of friends creep around a little, you can easily grab an empty classroom.

### Steacie Building $\pi$

This building used to have some seating on the lower levels. I have not been there since construction began on the River Building, but hopefully they improved the situation.

### Minto Center $\pi \pi \pi \pi \pi \pi$

See that? Six Pis. Yeah, that just happened. Maybe it's just because I'm a Civil and open piping/ductwork excites me, but this is my favourite building on campus. It is great for getting work done. Always accessible (even at night) from its tunnel entrance, it is the only building in which I have encountered megabytes-per-second download speeds on a wi-fi network (over wireless and early in the morning, but it still counts). Home to Carleton's Student Engineering Society, the Strong Lab, and Bell Theatre, Minto is all about engineering work. The computer lab on the fifth floor is always open, and tables are available on the first, second, fourth and fifth floors. The basement tunnel, while sometimes somewhat depressing, is always quiet and warm in the winter (due to the boiler system) and is the easiest place to focus on number crunching. The top of the stairwells offer a nice view and - from the number of empty bottles always up there - must be a good place for an adult beverage or two.

### Tory Building: $\pi \pi \pi$

Similar to Southam, you can easily grab an empty classroom on the second floor if you creep around a bit. There are the typical steel tables on the third and second floors, and comfy seats in the lobby - though they're not practical for anything other than resting.

### From: The Editors <[irontimes@cses.carleton.ca](mailto: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 in 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 opin-

ions, and everything in between. Anyone may send their submissions, complaints, questions and concerns to [irontimes@cses.carleton.ca](mailto:irontimes@cses.carleton.ca)

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Thanks to all the writers that contributed.

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# EXEC REPORTS




## President

**Jamie "Invisible Man" Baressi**  
- SYSC IV -

Hey C-Eng! I hope you're all enjoying being back at school. To all you first years: I hope you're all surviving the life that is Engineering! Life has been slightly tame since EngFrosh, but there are a whole lot of things going on! Textbook trade is ongoing (or, depending on when this gets published, just wrapping up) and our textbook library is up and running! Leo's has set up shop and ready to be your destination for food, drinks, and mid class snacks for those pesky 3 hour P.A. sessions. On a note for those of you asking, SIZING FOR ENG JACKETS IS COMING SOON! The tentative dates as it stands right now are October 19th, and October 20th. To you upper years who are thinking "well that's a lot later than usual": yes it is, but it was either that or mid-frosh week. The good news is that if you need to bug parents/grandparents/relatives/friends of friends for money, you now have plenty of time! That's all for me, folks! As usual, if you have any questions or concerns, don't hesitate to contact me at [president@cses.carleton.ca](mailto:president@cses.carleton.ca) (or any of the other execs). Or, if you're really adventurous, come visit us in 2090 MC. We don't bite (most days). Stay classy, C-Eng!



## VP Finance

**Emily "Lap Jumper" Lemay**  
- BIOM III -

Hi everyone! I hope you all had a blast with frosh week if you were involved, and in general a good start to the semester. :) This month I have been busy trying to sort out our finance software (Simply Accounting) which let me tell you is not so simple. I have also chosen my directors for the year. Warda Alavi is my finance director and Husam Albeldawi is my SGF director. As for what is more important for you all, fall SGF is well under way so if you are involved with a school group or a fourth year project this is a great opportunity to get some funding. Proposals are due by October 14th at 5:00pm in the CSES office, so don't wait too long or it will be too late! :( A sample proposal can be found on the CSES website and any other details have been sent out for numerous weeks in Announce, however, 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. Mid-terms will be starting very soon so good luck to everyone!



## VP Pubs

**Caleigh "Paperbag Princess" Rutledge**  
- ENVE III -

Hey C-Eng! I can't believe it's October already. As you can see, I'm so far keeping up with my goal to publish 8 Iron Times issues this year (YAY! 2 down, 6 to go!) We're still very in need of editors and writers, but I am pleased to announce that Kevin Young has joined the IT team as Director of Photography. This month, my immediate goals are the following:

- I'm working on reworking the website, so if you have any comments or would like to help out, please contact me at [publications@cses.carleton.ca](mailto:publications@cses.carleton.ca).
- I need to update the boards outside Alexander's, as well as establishing some visual aids for holiday cards and marketing purposes. If you're feeling artistically inclined, please apply for a directorship with me online at the CSES website.
- And as always, please send any articles for the Iron Times to [irontimes@cses.carleton.ca](mailto:irontimes@cses.carleton.ca)!



## VP Internal

**Kevin "Assbeard" Atkins**  
- AERO III -

Hello Carleton Engineering,

The position of VP-Internal has a relatively quiet portfolio in the month of September. In fact, most of my events happened during frosh week. These events include EXPO Carleton and the EngFrosh Pancake Breakfast. Both of these events were targeted at increasing CSES knowledge amongst first years but they were also open to upper year students. The events were overwhelmingly successful and to our pleasant surprise, on time!

Upcoming events in October include The First Year Conference where individual clubs and societies can advertise themselves to first year students. I strongly suggest all those who wish to present to e-mail me at [internal@cses.carleton.ca](mailto:internal@cses.carleton.ca).

To all first year students who wish to attend, you will see updates coming in the announce e-mails and on the calendar in the ME 3300 block. Additionally, if you are not a member of the announce list and want to receive weekly updates on events/ongoings in the C-Eng community, you can contact the previously mentioned e-mail.

In far future, I will be working with the President and other Executive/Council to improve the CSES Elections processes. The goal is to increase voter turnout and increase the competition for executive and council positions.

You will see the results of these efforts at future General Meetings of CSES.



## VP Academic

**Matt "Soaker" Molkoski**  
- AERO III -

Hi Everyone!

It's Matt Molkoski, your Vice President Academic, just giving you a quick update on everything happening!

Textbook Trade is still on, and will run until October 7th. If you have dropped off books, or if your books have sold, you have until November 14th to either pick up your books, or pick up your money. Miss the deadline, and the books will be donated to charity!

Coming up this month is the Carleton Student Engineering Competition! This happens all day Saturday October 22nd, and is a great way to add practical experience at an engineering design problem to your engineering career! You can find the sign up sheets in Leo's, or Alexander's Office (2090 MC). We are also looking for volunteers to help out with this, if interested, contact [academic@cses.carleton.ca](mailto:academic@cses.carleton.ca)

Finally, I am still looking for directors! I need one director for the Textbook Library, one to run Pi Day activities, and one to manage McCoy's Study Lounge. If you are interested in any of these positions, contact me at [academic@cses.carleton.ca](mailto:academic@cses.carleton.ca)!

Thanks again for reading, and remember: we here at CSES are always here for you! Contact us if you want to know anything, or just stop by the office to say hi.



## VP External

**Kristen "Dorothy" Jerabek**  
- CIVE II -

Hey C-Eng! I hope everyone had a good start to the school year, and that you all aren't too overloaded with work. Personally, I was rather busy in September attending conferences as VP Ex. I attended both CFES and ESSCO President's Meetings, and hopefully the information about other schools procedures I brought back will be useful in updating our own in the upcoming year. Also, I have found a Charity Director! Mike DeBenedictis is doing an awesome job planning Charity LAN #1. Finally, I have opened up applications for Congress 2012 which is in Whitehorse YK, from January 4th to 10th 2012. I will be accepting applications until October 7th. Good luck on midterms, and remember to keep an eye out for more opportunities to go to conferences which will be popping up in the next month! If you have any questions/concerns/anything else I might be able to help you with feel free to email me at [external@cses.carleton.ca](mailto:external@cses.carleton.ca), or come visit me during my office hours from 8:30-9:30am Tuesday and Thursday, and 1:30-2:30pm on Thursdays. Keep it classy folks!



## VP Social

**Erik "Caulk Tease" Willis**  
- AERO IV -

Happy October Everyone, I hope everyone enjoyed frosh week and all the fun that was had throughout September. Engbowl was a lot of fun with tons of sports being played, and everyone seemed to have a really good time. Intramurals are all filled up now, so if you wanted to play for the C-Eng team, sign up next semester! Coming up on October 14th is Engfrosh Reunion so get your bandanas out and get ready to watch some OHL hockey! Tickets will be on sale in Leo's! Look for posters for more information. Any group looking to plan events and wanting to see what events other groups are please email me and I will add you to a Google calendar that will hopefully have the dates of all events throughout the year.



## VP Services

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

Hey C-eng, What's up? Hope everybody's year has started off well and hopefully nobody is dreading back to school yet. So far everything has been hectic. As you can see Leo's is up and running, and hopefully all the countertops should be in within the next couple of weeks. As you can see there is a ridiculously giant space in the center of Leo's at the moment soon enough that giant space will be filled that will be filled soon enough... stay tuned to find out with what. Soon in Leo's we will also be selling some meat pies and some fair trade chocolate, if you have anything else you would like to see send me an e-mail and I will see what I can arrange. Looking at the SGRC and the office everything is up and running smoothly. The SGRC table expansion and storage lockers are on their way to completion, shortly. Make sure to check it out when everything's complete; when they are complete they will look good. If you have any questions feel free to e-mail me at [services@cses.carleton.ca](mailto:services@cses.carleton.ca). Also, I am looking for a new postmaster. This position is great for someone who wants to be involved but who does not have too much free time. E-mail me if you are interested. Ciao for now!



# NEWS

## CUSA Rep Story

Chris "Pirates" Henningson  
- SREE III -

Considering the seemingly infinite uses for the Charlatan, it would not surprise me if some of you have glanced at an issue at some point this past summer. If you did, you likely saw vague yet dire warnings of trouble brewing within CUSA. Or maybe you make it a point of pride to never read even a single word of the Charlatan, even as you make party hats. More power to you, but I have no such qualms.

As my summer job involved (among other things) cleaning pig's femurs and spines on campus, I had many opportunities to glance at that traditional target of insults and yucky liquids. And while I made little effort to understand the wonderfully unbiased and informative reporting therein, I at least glean that all was not well in Student Union Land. Something about councillors being fired; nothing out of the ordinary given how CUSA seems unable to go a year without some kind of infighting.

Possessing only this minimal background knowledge, one day I received a phone call requesting that I act as a proxy for an Engineering representative. Having sat through AGM's in the past, I wasn't too thrilled at the prospect. However, by the time the caller got around to offering free beer, my usual excuse of "But I'm laaaaazy!" was sounding tired even to me. And so it was that I became CUSA rep for a day.

It soon became clear to me that the council was sharply divided into two opposing teams. I'm not quite clear as to what their disagreement was (other than which of them should be in charge), so I nicknamed the two factions "Left" and "Right". These names do not conform to either group's political leanings - only to on which side of the room each sat.

From what I understand (and I may very well have missed something important), it seems that Team Left had somehow managed to pass a motion kicking nearly all of Team Right's councillors off the council.

Team Right responded by suing Team Left. A judge passed some sort of temporary legislation that - as far as I could understand the legalese - reinstated all previously-fired members until the judge could review all the evidence.

I was a proxy for someone on Team Right. I had been warned not to go to the bathroom because Team Left might motion to adjourn while I was out. This really didn't turn out to be much of an issue, though, since the first motion forwarded was one to adjourn. Team Left voted for, Team Right against. The chair didn't count Team Right's votes and declared the meeting over.

I felt badly for Team Right, but I was also glad to be out of there so quickly. I was honestly expecting the meeting to drag on for hours; now I could leave after barely 30 minutes!

Only I couldn't. Team Left left, but Team Right stayed even after campus security was called to empty the room. After some back and forth, Team Right was allowed to stay and continue the meeting. Someone called his lawyers and suggested we appoint a new chair to keep the meeting going. We waited while someone looked into this. I now felt I was earning my free beer.

The wait was rather long. Someone suggested a motion to defederate, which wasn't taken very seriously. Someone else suggested a motion banning toe shoes in meetings, and I became rather upset at the notion since I love my toe shoes very much. When I suggested a motion that Oliver's be given two years to turn a profit or else be shut down, someone explained to me in all seriousness that Oliver's actually just exists to launder money. He went on to explain that it wasn't the illegal kind of money laundering, but I kind of stopped listening after his initial revelation. Oliver's indeed is like that seedy bar from that movie where they hate



customers! This explains everything about that place!

Then came the least impressive part of a very unimpressive display. After a lot of rigmarole and waiting, the meeting finally got underway - this time with an interim chair. And with Team Left unable to filibuster or oppose any Team Right proposal, what do you think Team Right did? Pass a motion firing all members of Team Left? Vote on all contested issues? Officially declare that Team Left's moms dressed them funny?

No. After approving some minutes, they motioned to adjourn just like Team Left did hours ago. Now I may be a naive engineer, ignorant of how politics is played, but it seems like common sense that when your rivals give you that kind of opportunity, you do everything in your power to screw them over! If you're in a court battle already, it seems pointless to be chivalrous.

Regretting the hours I had just lost forever, I was left to wonder: "what on earth is wrong with this system?" I've been to engineering meetings, and we don't act like this! How did CUSA get so bad? I'm still waiting for my free beer. Something tells me it will be a while.

## For The Love Of My Sanity, We Need Writers!

The Iron Times is the Carleton Student Engineering Society's monthly newspaper. Again, it is the SOCIETY's paper, but due to what is hopefully a fluke, the society did not contribute enough to produce a full issue. That is why this issue might seem a tad flimsy and also why it was late this month. How would one correct this in the future? WRITE! DRAW! TAKE PICTURES! Do anything you can to help enrich the community. While it may (or may not) surprise you, this issue was delayed because of content problems. If you want to see future issues of the Iron Times come out monthly (if at all!) then contribute, and PLEASE submit it on time. On time doesn't necessarily mean within 10 minutes of the deadline, it means any time before the deadline. The sooner content is received, the more time the editorial staff has to polish the issue. For those of you who aren't sure what to write about, don't worry, we're not picky (just keep it equity appropriate).

If you need topics to write about, here's 2:  
Apple Vs Mac, or new copyright rules.

## A Lesson In Carleton Engineering History: Why The Canal Building's Name SUCKS.

Caleigh "Paperbag Princess" Rutledge  
- ENVE III -

Once upon a time, in a beautiful park-like greenspace on campus, someone from Carleton University said "We need another building." That person, knowing that administration would soon catch on, sent for help from C-Eng.

"CSES! We need your help! We need to build a castle! And as such, we will have a battleaxe, and defend the Castle with our knight and his trusty steed."

CSES, not knowing how valuable this idea was, or how little time they had left with the Mackenzie Field ignored them. Alas, a few years later, administration began construction on what is now labeled "The Canal Building". A student, remembering the engineers' plight, came to CSES again.

"CSES! We need to preserve the memory of our glorious days when we had more than just a quad! When our mighty field was the pride and glory of our engineers who reminisced of their golden jock high school years. We must make a point, to always know this building as our Castle."

And so CSES passed a motion, that all C-Eng people would know the tale of the CASTLE, and how it came to be, and why it will never be just "The Canal Building". That name stinks.



Can George still be the Castle's princess?

# Eject! The History and Technology of Ejection Seats

Gilles "Nightstalker" Messier  
- AERO V -

Ever since we first learned to fly, we have needed ways to safely abandon our aircraft in an emergency. After the widespread adoption of parachutes in the 1920's, emergency egress technology remained unchanged for some time. To bail out, a pilot had to open his canopy, unfasten his safety harness, crawl from the cockpit and hurl himself into the slipstream. All too often, however, g-forces or injury complicated this process, and many pilots perished. And as aircraft grew ever faster, traditional bailouts became all but impossible. Engineers thus developed a life-saving technology that spawned the iconic phrase of the jet age: "Eject! Eject! Eject!"

The ejection seat concept is almost as old as aviation itself, with the first bungee cord-powered ejection taking place in 1910. The technology, however, lay largely undeveloped until WWII, when England, Sweden and Germany independently developed their own models. These early seats were powered by either compressed air or small gunpowder charges. The first emergency ejection took place in 1942 from the experimental Heinkel 280 jet fighter, but the first operational aircraft fitted with an ejection seat was the Heinkel 219Uhu night fighter. After the war, the Martin Baker Company of England became a world leader in ejection seat design, a position they still hold. At this point, ejection seats did little but launch themselves from the aircraft; the pilot then had to separate himself from the seat and deploy his own parachute. As this process would be difficult or impossible for an injured or otherwise incapacitated pilot, Martin-Baker automated the entire process. Also, low-speed and low-altitude ejection required higher launch height to allow the parachute to safely deploy. This could not simply be accomplished with larger propellant charges, as the sudden acceleration risked spinal injuries. Solid rocket motors were thus installed to smoothly lift the seat away, creating the ejection seat as we know it today.

The modern "Zero-Zero" ejection seat is a sophisticated piece of technology designed to automatically deliver a pilot safely to the ground, even if incapacitated. The ejection handle simply needs to be pulled (in some aircraft, like the Russian Yak-38 jump jet, this is done automatically). Such seats can work in

almost all conditions, even while the aircraft is sitting on the ground (Zero Altitude, Zero Speed, hence the name). To activate the seat, the pilot first pulls the ejection handle. In early seats this was located above the headrest, with a pull-down cloth shield to protect the face from wind blast. As g-forces might prevent a pilot from reaching up, modern ejection handles are located either on the seat sides or between the pilot's legs. Once the handle is pulled, several events follow in quick succession. First, the canopy is jettisoned. In certain aircraft the canopy is instead shattered by explosive cord embedded in the plastic, while in others, a sharp spike on the ejection seat simply punches through the canopy (fun fact: "Goose"'s death in Top Gun – in which his spine is snapped by his seat impacting the canopy – is improbable; his seat would have punched through or otherwise protected him). Next, small "spur" straps attached to the pilot's heels and wrists retract – pulling in their limbs to protect them from injury – before a small explosive charge fires, launching the seat up along a set of rails. Finally, a small rocket motor boosts the seat well clear of the aircraft, ensuring sufficient altitude for the parachute to deploy. This entire process takes less than half a second.

The pilot's parachute and harness are integrated into the seat and automatically deployed. First a small drogue chute stabilizes the seat, followed by a pilot chute and the main canopy (in most modern seats, small rockets are used to more quickly open the main chute). The seat then detaches, leaving the pilot to drift to earth under his own parachute. Given sufficient altitude (usually 500ft+), the drogue system allows for safe injection at any angle, even while inverted. Indeed, certain seats are even gyro-stabilized for this purpose.

Numerous variations on the classic ejection seat have been developed over the years in response to unique flight conditions. In early versions of the Lockheed F-104 Starfighter, for example, the seat was designed to launch downwards so the pilot would not hit the aircraft's tall T-tail. With the advent of supersonic aircraft in the 1950s, engineers also investigated methods to protect ejecting aircrew from dangerous wind blast. In the Convair B-58 Hustler bomber, crew members sat in egg-shaped capsules with pneumatically-

actuated clamshell doors. The capsules contained flight controls (allowing the aircraft to be flown with the capsules closed), oxygen and parachutes and could float on water. While the principle was sound, in practice these capsules proved problematic. During a 1962 mid-air collision between a Convair XB-70 Valkyrie and its chase plane, the XB-70 co-pilot's seat failed to retract into its capsule while the pilot's arm was crushed in his capsule door. The co-pilot died while the pilot survived with severe injuries. A safer form of encapsulated ejection was later developed in which the entire cockpit detaches from the aircraft and parachutes to earth. This mechanism was used in the General Dynamics F-111 Aardvark. Interestingly, the Mach-3 Lockheed SR-71 Blackbird uses regular ejection seats; the crew's pressure suits provide enough protection from wind blast.

Perhaps the strangest ejection seats, however, were developed during the Vietnam War to allow downed pilots to fly back to friendly lines. These seats were equipped with a folding wing, a miniature jet engine and flight controls. Ejection seats have also been used in various spacecraft, such as the Soviet Vostok capsule that carried Yuri Gagarin into orbit in 1961. As the capsule's weight made landing in it dangerous, Vostok cosmonauts ejected and landed separately (this fact was initially concealed because FAI regulations concerning spaceflight records stipulate that the astronaut must land with his spacecraft). The American Gemini capsule also used ejection seats as an abort mechanism, as did the first four (two-man) flights of the space shuttle. The seats were deleted as more crew were added, as their installation on the mid-deck would have required extensive modifications to the orbiter. Shuttle astronauts subsequently used a drag-operated ejection system, wherein air drag on their bodies would push them up along rails through escape hatches.

Since their introduction in the late 1950s, Martin-Baker ejection seats have saved over 7,400 lives. It is unknown how many lives have been saved by ejection seats of all types, but as Martin-Baker seats are used in 93 countries, that figure might be a fair estimation. In any case, it is certain that many a pilot has been supremely thankful for those little yellow-and-black handles by their sides!

## Amazing Feats of Engineering

Trevor "Depththroat" Irwin  
- MECH III -

As we all know Engineers come up some pretty amazing things from time to time. It is my goal to bring you a feat of engineering that crosses the line from cool to awesome every month. Being a mechanical engineer and a student of military history I decided to start this series with quite possibly one the greatest examples of maritime construction ever. The Japanese Yamato-class super-battleship.

The Yamato-class of battleship remains to this day the largest battleships ever constructed. Two were complete, the Yamato and the Musashi, each displaced 74,000 tons. That's right seventy-four thousand tons, that's taking 1850 fully loaded 18 wheelers welding them together and calling it a ship. Again to put these monsters into perspective the next largest battleship ever completed, the German Bismarck, displaced just over 50,000 tons. The Yamato and the Musashi were armed with nine 46 cm main cannons grouped into batteries of three. Each of these batteries weighed 2,774 tons, or about as much as a typical 1930's destroyer. This meant the Yamato was bigger and more heavily armed than any single ship at the time. Each cannon fired a shell weighing just under 1500 kg and could fire 1.5 rounds a minute. Which meant every minute 20,250 kg of high explosives could be sent your direction from

ranges exceeding 40 km. The Yamato was designed to have the biggest and most powerful guns in existence, and she did. So already the Yamato was the biggest and most powerful of ships, this wasn't good enough for her designers she also had to be the most heavily armoured and manoeuvrable. The Yamato was armoured to withstand shells from her main weapon, the most powerful weapon in existence, at a range of 20 km, half its maximum range. However all her armour was clustered in the center of the ship in an effort to reduce overall length, leaving the bow and stern completely unprotected. The Yamato had a turning radius of 320 m, extremely small for a ship her size; the American Iowa-class has one of over 400 m. The main flaw of the Yamato-class was her poor power plant. Her propellers were powered by a low power steam generator only allowing max speeds of 27 knots and a max range of 7200 nautical miles. This power plant choice also required enormous amounts of fuel which further limited their war-time use.

The Yamato was laid down at Kure Naval Arsenal, in Hiroshima, November 4th, 1937, and was completed August 8th, 1940. She saw limited action and was sunk April 7th, 1945, during the suicide mis-

sion Ten-go after taking eleven torpedo hits and eight bombs. In the same action the light cruiser the Yagahi sank after taking twelve bombs and seven torpedos. Her sister ship the Musashi was laid down at Mitsubishi's Nagasaki shipyard March 29th, 1938 and was completed November 1st, 1940. She also saw limited action and was sunk October 24th, 1944 during Operation Sho-1 victim to seventeen bombs and nineteen torpedos. The armoring design of these floating mountains performed exactly as specified. In comparison the HMS Hood, Britain's largest battlecruiser, was destroyed by the Bismarck with a single shell. The Bismarck herself was defeated by the British battleships Rodney and King George V after being disabled by only three torpedos. The sister ship of the Bismarck the Tirpitz was sunk by a British air-raid after by three tallboy bombs.

The Yamato-class of battleship was a prime example of an attempt to make the biggest and best ship ever, and the engineers who designed them did a very good job. It also serves a warning as engineers, you may have the biggest, the best and the most advanced product but if someone else come up with another product that completely outclasses it, in the case of the Yamato the advent of the aircraft carrier, all your hard work will simply become a footnote in history.



# GALLERY



The Modern Engineer must be politically correct, no more motors lubricating no more buildings rise erect,



no electrical capacitors whose plates are high and fair, so instead of problem solving let's just sit around and care.



# ENTERTAINMENT



## How To Attend Parties

Mike "Homeward Bound" Debenedictis  
- SREE III -

Some of you may recall that I wrote an article last year on how to return home from a party. Based on the few times I've been out this year, and what I've seen, I've decided to write this article.

### The Fund-raiser

At Most Fund-raiser parties, you only need to show up. Which means you don't need to bring anything if you catch my drift. The main focus of these parties is to RAISE MONEY. Which means that there will be far too many people there and a limited supply of drink. There have been far too many times I've seen people show up at 10, and been disappointed to learn that the party has dried up. In order to prevent this, all one has to do is read your ticket. The start time isn't just suggested, it's when it starts. If the ticket says 8:00 pm. You damn well better be there at 8:00pm. When you get there, take full advantage of the occasion and when the party dries, you've still had a good time. All two hours of it..

### Flightsuit

This is primarily the same as the Fund-raiser party. Show up on time and take full advantage of the party. Flightsuit events tend to last a little longer than fund-raising events, but they can still be short lived.

My personal plan is to not predrink, but post drink instead. Also, when both committee and house residents tell you to leave. Leave.

### BYO

Bring your own, are always more personal. tickets are rarely sold for such events and there is no real set time for them to start. Now because of this, people will be arriving and leaving periodically. It's best to show up somewhere around the middle of all of this. If you're too early, whatever you brought is probably done and you end up mooching off your friends. If you show up too late, chances are, your friends will be mooching off you.

### The Competition

Every now and then there is a competition to find out which team of people is best. The usual advice is standard here, show up on time... Wear some team colours... Bring a peanut gallery... But what some people never think about, is how your body will react to such a large intake. Vitamin C helps boost your liver. Coffee and tea will speed up your metabolism. Any little bit helps! Especially when the opposing team is having a hard time standing, and all you've had to do was use the washroom 4 times.

### The Bar/Club

I personally am not a fan of predrinking, but the bar is the only time you would need to do so. If you're going downtown and go late, expect a line at the door. So try to show up before 11:00pm. Also, generally prices are higher the closer you get to downtown, so if you can stay on campus, Mr Olliver has some great deals.

### Some side notes:

-OC transpo your route before hand, and remember the stop you need to get off at

-Dennys is open 24 hours

-Post drinking is always better than predrinking

-Don't forget to eat accordingly

-Hydrate yourself beforehand

And for the love of all that is holy,

SHOW UP ON TIME!!!

## Havin' a Time with Barrett's Privateers

Jordan "Crack" Briggs  
- A.Sci V -

I'm going to be writing a multi-part series focused on the ins and outs of "havin' a time" east coast style. Being the proud and boisterous New Brunswicker that I am, I figure I might as well try to continue the trend of infusing C-Eng with as much Maritime flavour and cheer as possible. Before I get into the finer points of hosting a kitchen party or shucking a lobster, I figured I'd start out easy with a classic folk song that I know off by heart and think everyone else should too. The song's called Barrett's Privateers, and it's a folk song by the late Canadian artist Stan Rogers about the fictional tale of an ill-fated privateer vessel and her rag-tag crew during the American Revolutionary War. It's a great sing-along for any pub, tavern, or party and is also the unofficial anthem of the Royal Canadian Navy. You'll likely hear this tune sung at some C-Eng events in the future...so learn it now and join in the fun!

Oh, the year was 1778, HOW I WISH I WAS IN SHERBROOKE NOW!  
When a letter of marque came from the king  
T' the scummiest vessel I'd ever seen, GOD DAMN THEM ALL!

(Chorus, sung after every verse, more slowly after the final verse):

I was told, we'd cruise the seas for American gold /  
We'd fire no guns-shed no tears  
Now I'm a broken man on a Halifax pier  
The last of Barrett's Privateers.

Oh, Elcid Barrett cried the town, HOW I WISH I WAS IN SHERBROOKE NOW!  
For twenty brave men all fishermen who  
would make for him, the Antelope's crew, GOD DAMN THEM ALL!

The Antelope sloop was a sickening sight, HOW I WISH I WAS IN SHERBROOKE NOW!  
She'd a list to the port, and her sails in rags  
And the cook in the scuppers with the staggers n' jags  
GOD DAMN THEM ALL!

On the King's birthday we put to sea, HOW I WISH I WAS IN SHERBROOKE NOW!  
We were 91 days to Mont-ego Bay  
Pumping like madmen all the way, GOD DAMN THEM ALL!

On the 96th day we sailed again, HOW I WISH I WAS IN SHERBROOKE NOW!  
When a bloody great Yankee hove in sight  
With our cracked four pounders we made to fight, GOD DAMN THEM ALL!

The Yankee lay low down with gold, HOW I WISH I WAS IN SHERBROOKE NOW!  
She was broad and fat and loose in the stays

But to catch her took the Antelope two whole days,  
GOD DAMN THEM ALL!

Then at length we stood two cables away, HOW I WISH I WAS IN SHERBROOKE NOW!  
Our cracked four pounders made an awful din  
But with one fat ball the Yank stove us in, GOD DAMN THEM ALL!

The Antelope shook and pitched on her side, HOW I WISH I WAS IN SHERBROOKE NOW!  
Oh, Barrett was smashed like a bowl of eggs / And the main truck carried off both me legs  
GOD DAMN THEM ALL!

So here I lay in my 23rd year, HOW I WISH I WAS IN SHERBROOKE NOW!  
It's been 6 years since we sailed a-way  
An' I just made Halifax yesterday! GOD DAMN THEM ALL!

# BATTLE ROYALE

PARTNERED WITH



GAMING OTTAWA

At least there are lots of parties to choose from, you'll get the hang of it by the time you graduate.

## The Mercury 13: NASA's Early Space Women

Gilles "Nightstalker" Messier  
- AERO V -

On June 16, 1963, the Soviet Union launched the Vostok 6 space capsule, carrying Valentina Tereshkova – the first woman in space – into orbit. This feat would not be repeated until 1982, when Svetlana Savitskaya flew aboard Soyuz T-7. By contrast, NASA did not launch its first female astronaut – Sally Ride – until 1983 or its first female shuttle pilot – Eileen Collins – until 1995. It is possible, however, that the United States and not Russia might have been the first country to employ female astronauts. Enter the Mercury 13.

At the dawn of the space age, nobody knew how the human body would react to the extreme conditions of outer space. Some believed that zero gravity would interfere with blood circulation or digestion, others that it would completely disorient and incapacitate an astronaut. Consequently, NASA subjected its early astronaut candidates to a gruelling battery of psychological and physiological tests, simulating every kind of stress they might encounter during a space mission. In addition to full medical exams, applicants were exposed to high g-forces, vibration, high acceleration, extreme temperatures, isolation, loud noises and other extreme conditions.

It was during this time that Dr. William R. Lovelace, a NASA flight medicine consultant, began to wonder whether women would make better astronauts than men. Women, he reasoned, had lower average body masses (better to fit in the tiny Mercury capsules) and were more resistant to certain kinds of stress. Lovelace convinced his friend Jacqueline Cochrane – the famous female aviator – to fund an independent study to determine if women could pass all the same medical tests as the male astronaut applicants.

The first test subject Lovelace invited was Geraldine "Jerrie" Cobb, an accomplished civilian pilot. By age 28, Cobb had already logged over 7000 flying hours in over 60 aircraft, was a certified flight instructor and airline transport pilot, held three world aviation records (speed, distance and absolute altitude) and had won the Amelia Earhart Medal. Cobb and Lovelace reviewed over 700 applications to the "Fellow Lady Astronaut Trainees" (FLAT) program, narrowing the list to 25. These candidates were subjected to the Phase I Project Mercury medical evaluations, including such bizarre tests as examining muscular nerve function through electric shock and inducing vertigo by injecting ice

water into the ear. Of the initial 25, 13 passed Phase I, several with higher scores than their male counterparts. Hollywood producer James Cross dubbed them "The Mercury 13", casting them as the counterparts of the "Mercury 7" astronauts eventually selected for the US space program.

Dr. Lovelace intended that the Mercury 13 proceed to Phase II testing, but family responsibilities and other scheduling conflicts meant not all were able to. After Jerrie Cobb successfully completed Phase II and III, Lovelace made arrangements for the rest to follow suit, booking aeromedical testing facilities at Pensacola Naval Air Station in northern Florida. Unfortunately, when the Navy inquired as to Lovelace's authorization and funding source (presumably NASA), he was unable to respond and stalled for time. Upon discovering that FLAT was not an official NASA program, the Navy denied Lovelace access to its facilities. The remaining members of the 13 – many of whom, believing they would eventually be selected as astronauts, had quit their jobs – immediately received telegrams informing them of FLAT's cancellation. Aside from Jerrie Cobb, only Wally Funk completed Phase III, albeit in a piecemeal fashion over several years.



Infuriated, Jerrie Cobb and fellow FLAT member Jane Hart flew to Washington DC to lobby for the continuation of Lovelace's program, citing gender discrimination on the part of NASA. On July 17th and 18th, 1962, a public hearing on this issue was held before the House Committee on Science and Astronautics, with such figures as Jacqueline Cochrane and NASA astronaut John Glenn testifying. Unfortunately, Cobb and Hart were unsuccessful and FLAT was not granted official NASA support. Women would not be recruited by NASA until Astronaut Group 8 in 1978.

Many myths have surrounded the story of the Mercury 13, chief among them being that FLAT was an official NASA program (instead of an independent study), that the 13 received astronaut training (they only passed medical screening) and that the study was cancelled due to the misogynist social mores of the day. The latter notion was reinforced by John Glenn's testimony at the 1962 hearings, in which he argued that "men go off and fight the wars and fly the airplanes."

In reality, NASA's refusal to accept women as astronaut candidates was a direct result of their original recruitment mandate. The Project Mercury selection criteria stipulated that applicants had to be military test pilots with experience flying high-performance jets and that they must possess an engineering degree. As military test pilot schools did not yet accept women, the Mercury 13 were immediately disqualified. Also, none of the women had experience flying jets and few had the requisite degrees. Simply put, the 13 would not have been selected based on qualifications even if they had been male. Furthermore, the Mercury 7 were not chosen based on medical testing alone, but rather their possession of the fabled "Right Stuff": the ability to react calmly and rationally to dangerous, unknown situations. NASA felt that only military test pilots had the appropriate skills and temperament.

While the Soviet Union did launch first woman into space, Valentina Tereshkova's selection was based more on propaganda value than her qualifications (she was a textiles worker). Furthermore, the Soviets tackled the physiological risks of spaceflight by making the Vostok spacecraft largely automatic; their astronaut selection process thus placed less emphasis on piloting ability.

Most of the Mercury 13 went on to successful careers in aviation. Jerrie Cobb became a NASA consultant in 1961 and was later nominated for the Nobel Peace Prize for her work as a missionary pilot in the Amazon. In the mid-90's she lobbied to fly aboard the space shuttle to test the effects of space flight on ageing bodies, just as John Glenn eventually did in 1998. She was unfortunately unsuccessful.

While the FLAT study was unofficial and its members never seriously considered as astronauts, it is interesting to wonder how history might have differed had the Mercury 13 been allowed to fly.

## SREEdly Awesome Shit Going Down: The second annual Green Energy Symposium packs a green punch that's hard to ignore

Kati "Saucy Beaver" Sidwall  
- SREE IV -

The Sustainable and Renewable Energy Engineering (SREE) kids are back with a vengeance – and this time, it's personal.

Last year, the first annual Carleton University Green Energy Symposium (CUGES) was a phenomenal success. The event, which was free to attend, attracted close to one hundred guests, including students, faculty, and industry experts. The day-long conference rocked the student body with presentations focused on sustainable development in technology and policy.

And now, on Saturday, November 5th, in the Bell Theatre and Minto Foyer, we are going to blow your mind.

The slow progress of truly sustainable devel-

opment is not because of a lack of technology. It is not because of a lack of money. It is because of a lack of the Super-Engineer, and we are looking to fix that problem. This event is the first step.

The second annual Green Energy Symposium will educate attendees on sustainable development, both inside and outside of the engineering world. It will inspire and motivate you to kick your own ass into high gear, whether or not you are interested in working in the green energy industry. We are engineers, and we are responsible for serving the public by delivering consistently phenomenal results. I urge each and every reader to attend this conference and enrich their knowledge of the global movement to sustainability.

And we've made it very easy for you to attend.



The event is absolutely free, and lunch is included. What more could you ask for?

If you'd like to learn more about the Green Energy Symposium, or if you're interested in joining the magnificent crew of volunteers that make the event possible, shoot an e-mail to [carletonSREE@gmail.com](mailto:carletonSREE@gmail.com). We'd love to hear from you – don't be a stranger.

SREE you later, C-Eng.

Or in my case, never.

# Mad Libs

In my grade \_\_\_\_\_ year,  
(number between 1 and 13)  
 while I was in the middle of \_\_\_\_\_, the  
(physical activity)  
 vice principal called me to the \_\_\_\_\_.  
(location in a building)  
 Worried I was going to be asked about \_\_\_\_\_  
(reason for being arrested)  
 that happened last Friday, I \_\_\_\_\_ grabbed my  
(adverb)  
 \_\_\_\_\_, and \_\_\_\_\_  
(article of clothing) (disease or medical condition)  
 medication, and \_\_\_\_\_ there. Waiting  
(method of travel, past tense verb)  
 for me, was my school's \_\_\_\_\_ wanting  
(highschool staff member)  
 to \_\_\_\_\_ with me about my plans after  
(form of communication, verb)  
 graduation given my skill in \_\_\_\_\_. I was  
(unique ability)  
 then \_\_\_\_\_ about my interests  
(past tense verb)  
 (mostly video games making use of a \_\_\_\_\_) and  
(weapon)  
 my favourite highschool subject, \_\_\_\_\_.  
(area of study)  
 Following this, several possible future \_\_\_\_\_ were  
(plural noun)  
 suggested to me including \_\_\_\_\_ to which I  
(military trade)  
 discovered apparently \_\_\_\_\_ had also  
(famous historian)  
 done in \_\_\_\_\_. I decided to think it  
(time period in one's life)  
 over at home. That night, while watching \_\_\_\_\_,  
(education oriented tv show)  
 I realized between my fascination with \_\_\_\_\_  
(scientific principle)  
 and my desire to one day \_\_\_\_\_ I still had  
(ambitious achievement)  
 to further my education. After some \_\_\_\_\_  
(research method)  
 showed that while \_\_\_\_\_ has been known to cost up  
(a University Cost)  
 to 7000 \_\_\_\_\_ a year, it's still better than  
(form of currency)  
 watching my \_\_\_\_\_ drop \_\_\_\_\_ s  
(family member) (object weighing about 5 kg)  
 on their \_\_\_\_\_ everyday at their job.  
(body part)

# An ode to Popcorn and a cup of Tea

Caleigh "Paperbag Princess"  
 - ENVE III -

Oh popcorn, how your greasy buttery goodness makes me happy  
 So fluffy, so puffy, as you are eagerly munched, and never shared with my roommates.  
 Oh popcorn, how your crunchy kernels pop like little bubbles of happiness between my teeth.  
 Oh popcorn, how much I adore you,  
 When my tummy is hurting from the stress of finishing thermo labs  
 And I consume you by the bag, until my tummyache is gone.  
 Or when I am catching up on missed episodes of How I Met Your Mother. Or The Big Bang Theory. Or Flashpoint. Or Rookie Blue. Or Heartland. And I never share you. You are my one and only.

Oh you adorable cup of tea  
 You monstrously sizeable cup of tea,  
 How your sweet hotness is sugary and soothing  
 As it rots my teeth to pieces.  
 Oh my cup of tea, how you allow me to simultaneously distract myself and get work done like writing articles for the iron times when we need to fill space in the October issue and it's already the 3rd of October and we still haven't gone to print.  
 How I adore you.  
 Even though you make me need to pee 8 more times before sleeptime.



# Movember

Rob "Merlin" Stalker  
 - AERO V -

Hey Carleton! You ready to get your moustache on? Yeah you are! ...oh, wait. You don't know what I'm talking about yet.

During November each year, Movember is responsible for the sprouting of moustaches on thousands of men's faces, in Canada and around the world. With their "Mo's", these men raise vital funds and awareness for men's health, specifically prostate cancer. Carleton Engineering has put in a team for the last three years, and like my father's moustache, this isn't going to change.

impressiveness of both moustaches and dollars raised and this year we're taking it to the next level. So if you like to help out a great charity join the team, make a donation or spread the word about prostate cancer.

This isn't just a guy thing either - Movember is open to both Mo Bros and Mo Sistas. While Mo Bros can obviously grow (or give their best effort) a mo', ladies can rock some pretty sweet fake moustaches, the infamous leg mo' (ask Kaitlyn Stockermans) or just promote the cause. we'll take everybody!

Learn more about Movember - [movember.com](http://movember.com) Join the Carleton Engineering Movember Team - [https://www.movember.com/ca/register/details/team\\_id/199116?ref=nf](https://www.movember.com/ca/register/details/team_id/199116?ref=nf) (or just search for Carleton Engineering Movember from the Canadian Movember page!)

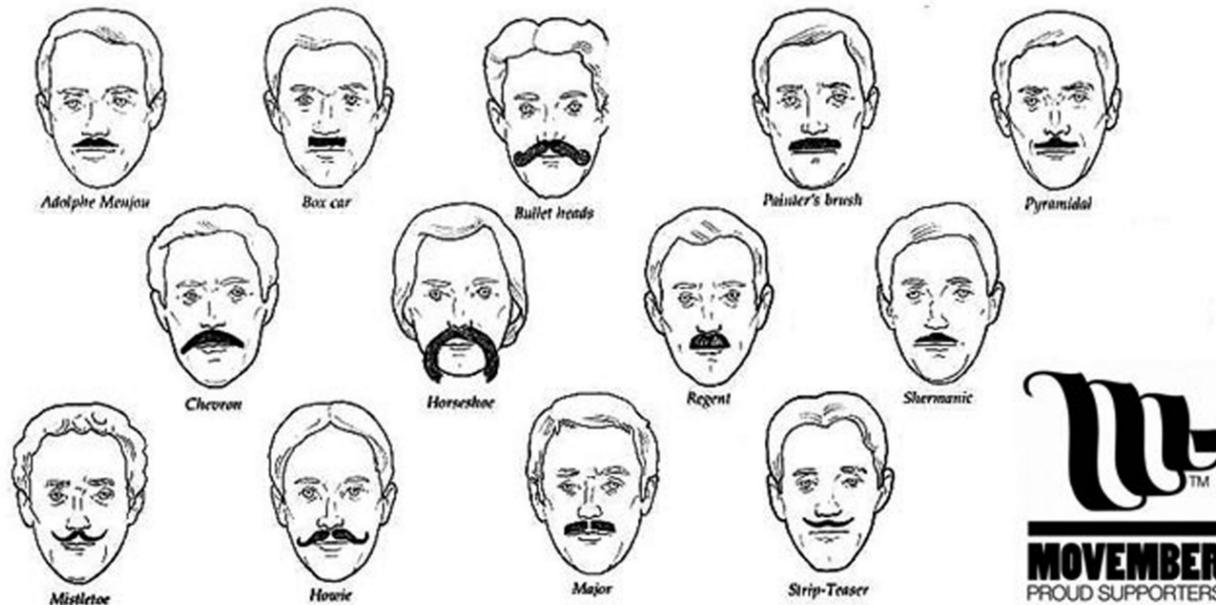
We've been steadily increasing in number and

Get your razors ready, because come Movember 1st, all mo's are off.

# WTF Of The Month



This photo was taken by a devoted reader during his vacation away in China last summer. While many readers I'm sure have seen many different signs all over the internet demonstrating translations gone wrong, it's still always fun to find one in real life. This sign is for a washroom found in Xiang, China. It definitely makes one wonder as to who the translator was to come up with this one.



I've been more than 20 years without alcohol or coffee, no I am not a robot.

# COMICS & ART

## Wasted Talent

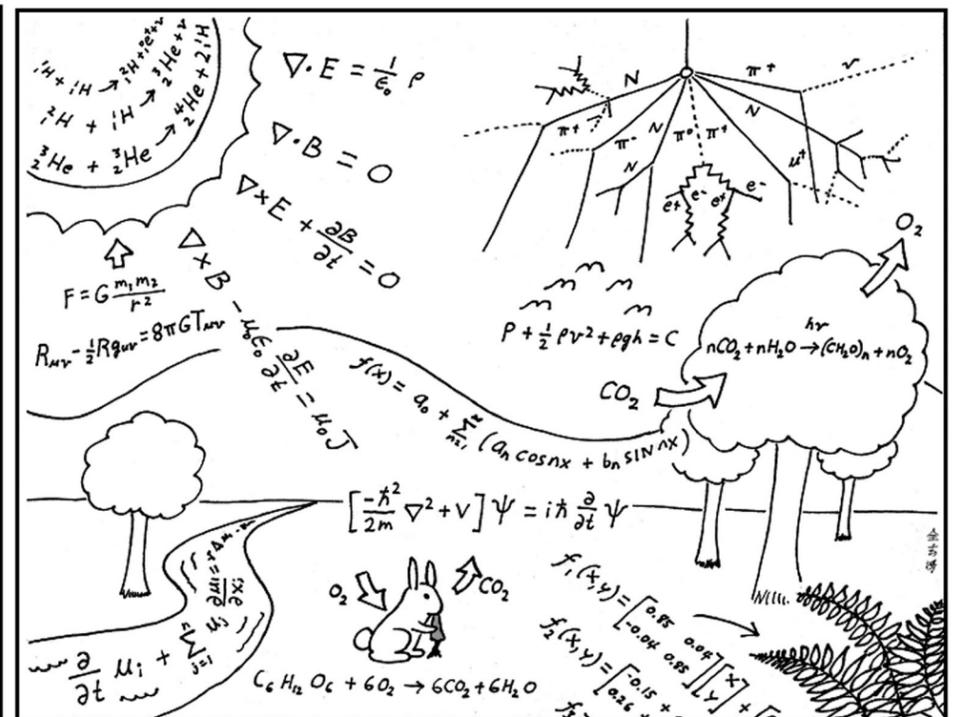
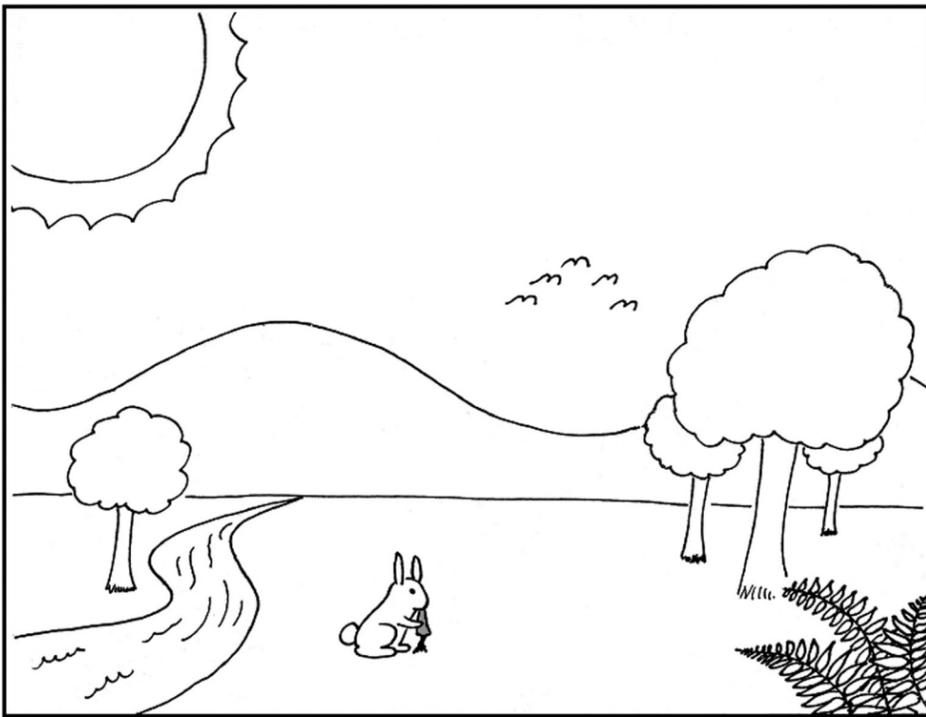
[www.wastedtalent.ca](http://www.wastedtalent.ca)



WASTEDTALENT.CA

## Abstruse Goose

[www.abstrusegoose.com](http://www.abstrusegoose.com)



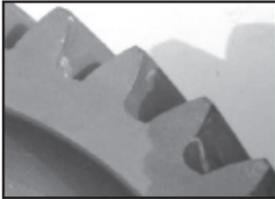
This is how scientists see the world.

## xkcd

[www.xkcd.com](http://www.xkcd.com)



Is it a bad thing that I can identify nearly all those equations?



# LAST WORDS



## Uses For The Charlatan

- Soundproofing your room, though you'll want to cover it with to avoid the illusion of being surrounded by them.
- Crumble up some pages and stick in your running shoes to absorb the odour.
- Soak in clean water. Then, lay across a warm barbecue grill. Close the lid and let soak for an hour. Then, remove and wipe the grills clean!
- A fan when your roommate sets off the smoke detector, again.
- Use it to make piñatas.
- You can read it.

## Sleeper of the Month



Being people's choice takes a lot out of you. This month's winner, Colin Barber, took every chance he could, as demonstrated here, to get any little bit of sleep possible during engfrosch. Being only into the first few days of engfrosch he was already reduced to conserving energy for inspiring young frosh's minds.

\* 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

All my profs this semester speak understandable English!

next statement

BACON STRIPS AND BACON STRIPS

next statement

OH, AND VAMPIRES TOO.

next statement

I'm going to need an old priest and a young priest...

next statement

Trevor Irwin is taking my jeerrrrrrbb!

next statement

Praise the lord and pass the ammunition!

next statement

I wonder what it would be like to date a girl...

next statement

I'm not easily impressed. . . but that's impressing me! :)

next statement

drinkin' thinkin'..liquor logic in a can

next statement

Mackenzie Building: designed as a labyrinth in an attempt to keep attractive artsies from leaving.

next statement

I used to drugs. I still do, but I used to too.

end

Want to say something? Post to the loop at:  
[irontimes.engsoc.org](http://irontimes.engsoc.org)

## Upcoming Events - October

						1 <b>BlackLight 2.0</b>
2 International Day of Non-Violence	3 First Launch Of The V-2 Rocket	4 Launch of Sputnik	5 <b>Bridge Info Session</b>	6 <b>IEEE Day</b>	7 <b>University Day</b>	8 National Costume Swap Day
9 Leif Erikson Day	10 <b>Thanksgiving</b>	11 <b>Fall GM</b>	12 Freethought Day	13 International Suit Up Day	14 <b>Engfrosch Reunion</b>	15 <b>SOOPP Event</b>
16 <b>World Food Day</b>	17 National Edge Day	18 Founding Of BBC	19 Armillarium	20 Canada US border set on the 49th parallel	21 International Day of the Nacho	22 <b>Eng Comp</b>
23 Mole Day	24 United Nations Day	25 Cuban Missile Crisis Anniversary	26 <b>SREE Billiard Night</b>	27 World Day for Audiovisual Heritage	28 International Animation Day	29 Leibnitz invents the integral sign
30 Mischiev Night	31 <b>Halloween Walk</b>					

Watch out for the next



**November**