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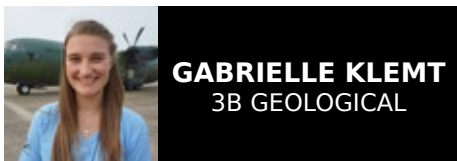
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## Why Do We Wear Iron Rings Again?

Dam Failure in Brazil is a Sobering Reminder



**GABRIELLE KLEMT**  
3B GEOLOGICAL

It is no secret that mining has a bad environmental rap. Often, mining companies try to dispel this view by promoting the sustainable measures they take to mitigate their environmental impact to the lowest it can be. While far from perfect, mining has drastically improved its environmental footprint in the last 100 years. Even the last 50 years have seen constant innovation to do better by the communities and ecosystems around which mines are built. One unavoidable aspect of mining, however, which has yet to be solved, is the aspect of tailings.

Tailings are the result of the processing of mined rock. Usually finely milled, the tailings are mixed with water to form a sort of sludge which can be contained somewhere as the particulate matter settles out of solution. One major issue with tailings is that it is often very concentrated in chemicals due to the breakdown of minerals during milling and the treatment with other chemicals to remove the metal being mined. Back in the days before regulations, mines would simply dump this stuff in their backyards causing all sorts of problems to the flora, fauna, and water systems which we are still trying to deal with to this day. Now, we keep tailings enclosed in tailings dams, preventing it from mixing with surface or groundwater systems. Designing proper tailings dams is one of the most important aspects of mining today.

It becomes all the more shocking then, when you hear about a disaster on the scale of the Vale tailings dam failure which occurred on January 25 in Brazil. The dam burst and sent a torrent of thick, fast-flowing liquid sludge pouring through the



Sendaro Federal via Wikipedia

Aftermath of the 2015 tailings dam failure at Bento Rodrigues, a mine in Brazil.

landscape. Along the destruction path was the administrative building in which 100 employees were having lunch. The warning system couldn't give them enough time to leave the building and get to safety. 110 people are now confirmed dead and another 238 victims are still missing, most of whom are employees of the mine. This disaster is the most deadly mine failure in Brazil's history.

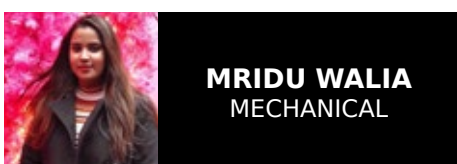
Vale, the company who owns the Brumadinho mine, is one of the world's top iron producers. It claims to still not know the cause of the failure, although the dam was built in the 1970s. There has apparently been an attempt, since the last major

tailings dam failure in Brazil in 2015, to ban upstream tailings dams as an obsolete way to store the mine waste. Evidently, there has been pushback against this measure, which would cost companies who use these dams to store waste, a lot of money.

What can the takeaway be here? Well evidently after two of the worst tailings disasters in Brazil's history occurring in such a short span of time, causing unspeakable environmental damage and loss of life, the government is going to try pushing through legislation to ensure failures are caught before they happen and prevented. When this will be implemented, if ever, is anyone's guess. The mine at

Brumadinho has a second dam which will now be closely monitored for any signs of rupture or dam weakness. The takeaway cannot be never to mine again, but what can we as university students do to make sure when we enter the workforce that we do not contribute to willful ignorance of dangerous situations. As engineers, one day we will have the good of the public on our shoulders and like the iron rings we wear to symbolize the failed bridge in Quebec, we can't forget that the work we do can have real-world consequences even decades after it is done. As the engineers of the future, it is up to us try to find better ways of doing things than the generation that came before us.

## Waterloo Student Receives L. M. Alexander Award



**MRIDU WALIA**  
MECHANICAL

Fiqir Worku, 22, along with two other society leaders, was recently awarded the Lincoln M. Alexander award by the government of Ontario for her work in establishing Racial Advocacy for Inclusion, Solidarity and Equity (RAISE). She demonstrated exemplary leadership skills in her effort to end racial discrimination by promoting inclusivity and equality in society.

The ceremony was held at Queen's Park in Toronto on January 21st. The Honourable Elizabeth Dowdeswell, Lieutenant Governor of Ontario presented the awards alongside Vincent Ke, Parliamentary Assistant to

the Minister of Tourism, Culture and Sport.

Dowdeswell said, "The Lincoln Alexander Award recognizes exceptional individuals who have taken it upon themselves to challenge systemic discrimination, acting in substantive and distinctive ways to fight racism. I am delighted to celebrate this year's recipients as they continue the legacy of a trailblazer whose impact we mark every year on January 21."

The Lincoln M. Alexander Award was created in 1993 in the name of the Honourable Lincoln Alexander, the first Black Lieutenant Governor of Ontario, the first Black Member of Parliament, and the first Black federal Cabinet Minister. January 21st, which is the day of his birth in 1922, is recognized as Lincoln Alexander day in Canada to commemorate his legacy and recognize his contributions. According

to Ontario Honours and Awards, it is presented each year to three people who have demonstrated excellent leadership skills in eliminating racial discrimination and towards promoting a positive change in society: two Student Awards and one Community Award.

RAISE, the thirteenth FedS student-run club, was officially initiated this Winter 2019 and has been in the works for about a year. Its objective is to address issues such as xenophobia and racism occurring on campus. "It's essentially a space for peer support. We have hours every single day for people to drop by if they have any concerns or just a space to talk in a non-judgmental way," said Worku. Reportedly, a formal incident reporting system is in progress which would allow students to lodge official complaints or concerns that would be

kept in records. The RAISE team includes 6 executives and 2 co-coordinators and Fiqir disclosed that the volunteering response they have received from students so far is pretty good.

FedS voted in favour of a 20-cent increase in the student fees last March as a way to fund the club. However, the new policy that made student fees optional raised concerns about the budget. Worku expressed concerns about the funding because they currently "don't have any other partnerships or sponsors".

According to Ontario News, the other two awards were received by Manaal Chasso, 18, of Ottawa and Lisa Wang, 18, of North York for running anti-racism campaigns and establishing the Social Justice and Equity Committees at their respective high schools.

# Letter From the Editor

## St. Valentine's Day: A Bitter-Sweet Holiday



**SAMRIDHI SHARMA**  
EDITOR-IN-CHIEF

Can you believe how fast January flew by? It was the first day of classes like yesterday! I hope you all are staying warm, what with the -40 degree weather outside. And you know what, I can take the cold too. It's the ice that catches me off guard. One second I'm walking on the sidewalk, the next I'm eating it. If anyone asks, that did not happen. Watch your step out there and take a few pointers from your favourite penguin. That waddle will save you, my friends. Anyway...

It is February, and you know what that means! Valentine's Day is going to hit us like a brick before we even know it. Before you dismiss my editorial as another one of those pieces drenched in romanticism over the pink in the air, the warmth in a shared pocket, and the two-can-eat dessert, well, think again! Did you really think an outspoken, opinionated, and (sometimes) unapologetic girl like me will condone the practices of the day of St. Valentine?

Let's step back and dive into the history of this holiday. Who was St. Valentine and why are we celebrating him? Well, to give you the short answer, I don't know. There are over three saints recognized by the Catholic Church who were named Valentine or Valentinus, and they were all martyred. The legend of St. Valentine goes something like this: in ancient Rome, Emperor Claudius II, deciding that single men made better soldiers than men with families, ruled out marriage for young men. Valentine, a priest, realizing how unjust this was, started performing marriages for young lovers secretly. Obviously, Claudius found out and ordered Valentine be killed. Quite a tragic story, if you ask me. Why must people die over love?

Another legend says that Valentine's Day is celebrated in the middle of February to "Christianize" the Pagan celebration of Lupercalia. What is Lupercalia? Glad you asked. In ancient Rome (those Romans, I tell you), members of the Lupercal, an order of Roman priests, would gather at a sacred cave and sacrifice a goat for fertility and a dog for purification. They would make strips out of the goat hide, dunk it in the pure blood, and slap women and crops with the hide. Women would line up to get slapped with the hide because they believed it made them more fertile. Then they would place their names in an urn and, like a lottery, men would draw names from it. The new couples would stay together for the remainder of Lupercalia, and often get married after. How romantic!

So here is my take on Valentine's Day. I am not against it. I really do believe in being able to choose what you celebrate. However, this one is for those who are not celebrating this day. We all need that extra support when all we see is annoyingly happy twosomes around us. This is also for the annoyingly

happy twosomes who are not celebrating the day of love out of pure choice (or other reasons). I hear you, and I support you.

The fondest memory I have of Valentine's Day is when, for his own birthday which falls on Valentine's Day, my grandfather bought my mom, his daughter-in-law, a Valentine's Day present. I found it beautiful, and it reiterated this thought: Valentine's Day is not just for couples. It is just a day for love, be it any kind. Like, when I was working at WatPD for a co-op, we gave each other Valentine's Day cards and candy to show our appreciation. One of my friends also buys her parents presents for Valentine's Day and I think that is super cute. Love is a beautiful emotion and it comes in many shapes and forms.

However, with all this celebration, this day also brings a lot of expectation. We expect presents from each other. Those of us in relationships expect dates and boxed appreciation. While presents and gestures are a beautiful way of expressing love, sometimes our expectations can be a little misguided. For example, I once had a friend ask me how much she should spend on a Valentine's Day present for her partner considering what they got her for her birthday. Honestly, I did not have an answer! How does it matter? I thought presents were about meaning and appreciation. How do you put a price on meaning?

This brings me to my point about Valentine's Day being an expensive holiday. Didn't Christmas just go by? Didn't we just spend all our money on presents for everyone we know? Honestly, if you are celebrating this holiday, just undertake a DIY project, because how else are you funding it? Use Friends as a guideline: borrow your friend's sock bunny to gift to your partner, or re-gift the mix-tape your ex made you.

So here are a few things you can do instead of celebrating the holiday the old-fashioned way:

Start a new TV show. Alone. By yourself. The benefits of doing this are two-fold. First, you won't feel guilty about watching the TV show without your partner, as most couples do. I think Urban Dictionary calls it television cheating. Second, you can watch a TV show that a potential partner might never watch with you. You think your boyfriend will ever watch Gilmore Girls with you? Think again!

Learn how to cook for yourself. Okay, let's be real, you won't learn how to cook in a day. But come next Valentine's Day, you will be so prepared!

Go to that expensive restaurant. Again, alone. It's what you would have done if you were with someone, except now you are only paying for one. Eat up!

Go to that expensive restaurant with your friends. Split the bill, and you are still only paying for one. Eat up!

Go to the mall and buy yourself presents. Go to the mall and window shop.

Go grocery shopping! Everyone is busy

with their plans. Walmart will be empty, and you get dibs on all the fresh stuff. Also, how cool is it when you go to the grocery store and the aisles are empty? It's like being teleported to another dimension.

Catch up on studying while everyone else goes out to party. Or, you know, watch TV. Go revisit my point about television cheating. I'll wait.

Do nothing. It's just a regular day. The holiday does not apply to you. Wait, holiday? What holiday?

Jokes aside, believe that you are worth so much more than you give yourself credit for. While mainstream media propagates love as this enchanting feeling, know that you deserve so much better. Media and I have a weird relationship, in the sense that I do not agree with much of it. The idea of love is very prevalent and impossible to shake off in most consumable media. Growing up in a culture very influenced by Bollywood, I saw myself as a piece that fits in someone else's puzzle. Like when the heroine in movies only plays the protagonist's love interest. It took me a while to realize all things wrong with this. I wish we could be more vocal about this. I wish all the media that I consumed as a kid did not tell me that I did not deserve my own story.

While Valentine's Day is a celebration of love, and there is nothing wrong with that, there are so many ways the world celebrates love. Let's expand our horizons, and maybe pick our favourites along the way. Here are some of mine:

In the Hindu culture, we have the God of human love called Kamadeva. To celebrate him, every spring we go out on the streets with colours and water and throw it at each other. We have water balloon fights and eat ridiculous amounts of food all in the name of this one God. Isn't that a much more engaging way to celebrate love? Everyone is welcome to play! There is music, there is food, and there is more colour than you can imagine. Pink is literally in the air.

In South Korea, on Valentine's Day women buy men chocolates, and men do the same on March 14th. For all the singles out there, on April 14th, they celebrate "Black Day". On this day, everyone who has not been included in the February 14th and March 14th celebrations, goes out to eat black bean paste noodles, and they even compete in speed eating competitions! It is right up my alley if I am being honest.

In Finland, on February 14th, Friend's Day is celebrated. It is an attempt at making Valentine's Day more inclusive so that no one feels left out. People still exchange candies and cards, but the norm is to exchange only pink roses, not the red ones. Can we do that here too, please?

So, my point is, while Valentine's Day can feel somewhat lonely, you can still celebrate it (or not) in any way you like. How do you plan on celebrating Valentine's Day? Let me know by emailing me at [iwarrior@uwaterloo.ca](mailto:iwarrior@uwaterloo.ca).

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Send your submissions for the next issue to [iwarrior@uwaterloo.ca](mailto:iwarrior@uwaterloo.ca).  
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The Iron Warrior is a forum for thought-provoking and informative articles published by the Engineering Society. Views expressed in The Iron Warrior are those of the authors and do not necessarily reflect the opinions of the Engineering Society.

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

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

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# FedS Referendum: To Be Represented or Not to Be?



**GABRIELLE KLEMT**  
3B GEOLOGICAL

If you've been anywhere on campus recently, you've seen the posters. At first, you may have thought they were unrelated, some of them talked about bad landlords, some of them about employee rights, but the more you saw them the more you realized the common theme: they're all about legal representation. Closer inspection would have shown you that the posters are bringing your attention to the referendum on le-

gal representation.

FedS is having a pretty active semester; there are the annual elections taking place, and there are two referendums for students to vote on at the same time. If you haven't taken the time to read any of these posters or to look into what they're all about, I can break it down for you. For more information on the FedS elections, check out the candidate information in this issue.

The first referendum we're having is to do with legal representation. Like the student health and dental plan, this legal plan will be opt-out if you want. The decision is whether or not you think students should pay \$30 per term to essentially keep a legal team on

retainer for the students' possible legal traumas in the areas of housing, employment, and academic discipline. Presumably, these are the legal woes most likely to affect your average student at a co-op university.

These lawyers will not be able to represent you if you get a speeding ticket or deal with citizenship paperwork, but there will be a useful hotline which you will be able to call to get advice and information about these topics and more. Before they brought this to the referendum which will soon appear in your email-box, FedS did a survey of students and received 513 responses. This may not seem like much considering Waterloo's enrollment is more than 36,000

students, but it was enough to get the idea a spot on the next referendum ballot.

The second referendum asks who should have access to a GRT UPass (the privilege we pay for to get "free rides" on the GRT). FedS wants to know if students think that part-time students should also have access to the UPass system. It is not asking whether full-time students should have access, so for most students, this referendum will not affect you. However, taking notice of the issues at our school is still important and your voice can have weight if you choose.

More info on both referendums can be found on the FedS webpage. And don't forget to vote Feb 5-7!

## FedS Elections: Team Ignite

**MICHAEL BEAUCHEMIN**  
**SENECA VELLING**  
**TOMSON TRAN**

Hello, faithful readers of the best newspaper on campus! We are Team Ignite, running in the FedS Executive election, and we're going to tell you why you should care and vote in this FedS election! Remember, if you're voting Team Ignite, also vote Matt Gerrits to support experience and reasonable governance! The link to go vote is:

[Vote.feds.ca](http://Vote.feds.ca) (from February 5 - 7, 2019)

### Our Platform

Find out More at [uwignite.com](http://uwignite.com)

At a high level, Team Ignite is focusing on a few key issues for students: Mental Health, Transparency, Sustainability, Student Engagement, and protecting students, among many other ideas.

Mental Health is not just a buzzword for us! We have sat on the PAC-SMH and the CoSMH. We understand enough to know that we can't do this alone, but we have a starting point. Notably, expanding the network of mental health support and embedding it within the student body, lobbying the government and other sources of funding for more support, and fostering belonging in the UWaterloo community.

Transparency is very important to us, especially after the unfortunate handling of the Bomber's closure. We have already worked to make more budgets publicly accessible for students who care about how their money is spent. Most of all, we want

to implement full financial transparency for full members of the Federation - you should be able to go into the office and ask the VP OF for the Federation's 'books' at any point.

We have spent years working in sustainability-related fields, and talking to and learning from experts. Using what we know, we want to work on improving our environmental footprint using proven techniques such as eliminating single-use wastes like Styrofoam and plastic, and avoiding greenwashing (boxed water, anyone?). Environmentalism costs money, and where we put our money matters too. So, we're going to lobby for the ability to decide where Endowment fund money goes, and we will control the Federation's own investments.

We are not going to pay lip service to student engagement to win the election. FedS hasn't had a stellar track record, especially when reaching out to Engineering or the satellite campuses, until quite recently. We will hold office hours outside of the FedS office in Engineering, Math, Architecture, GBDA, Pharm, etc., generate opportunity for engagement between elected councilors and their constituents with town halls and office hour support and aim to increase the ease of access to satellite campuses with inter-regional busing support.

Finally, we hope to protect students better than has been done in the past by providing you with agency and support to represent yourselves better. Members of Team Ignite wrote the language for the Legal Service Referendum. We submitted it to Council for approval so that you might

vote on it this election season. We hope to be able to implement the results of a successful referendum. The legal service will empower students by providing a 24/7 legal help hotline and will allow you to better know your rights for tenancy and housing, academic grievances and affairs, and co-op and employment issues.

### Meet the Candidates

Michael Beauchemin is running for President of the Federation. You may know Michael from his work with the Engineering Society (flying high since F14!), where he has been VP Finance for the past 2+ years. He's done all he can for the Engineering Society and is now passing the baton to the next generation. That doesn't mean he doesn't have more he wants to see change! To better advocate for students and improve living and education conditions at the University, he wants to tackle FedS. Students deserve better and more from the Federation of Students, which just won't stand up for them enough.

Seneca Velling is running for Vice President, Operations and Finance of the Federation. You may know Seneca from the couple of times he has appeared at EngSoc Council, through his work as FedS Councilor, or as a Nano Eng wannabe. Seneca has been hard at work already trying to fix FedS policies and procedures, as well as its financial practices, but for some stuff, you need just a bit more sway. He's hoping that being able to exercise more control over the budgeting process will allow him to make sure the Federation's commercial services actually work to serve students, instead of

just subsidizing a business's losses.

Tomson Tran is running for Vice President, Student Life of the Federation. If you attended the recent All Societies Assembly, you might have met Tomson, who is the AHSUM (AHS's Student Society) President this year, as well as a Director on the FedS Board of Directors. Tomson is, similarly to Michael, happy to pass the torch to the next generation in AHSUM, but FedS requires an experienced touch to course-correct and stabilize and solidify the Federation for years to come.

Matthew Gerrits is not a Team Ignite candidate, but Team Ignite is officially endorsing him for the position of Vice President, Education of the Federation. Matt has already been doing an amazing job as the current VP Education and because he knows FedS needs sound leadership and driven advocacy moving into an uncertain future, he is preparing to give another year of his time to the Federation. He is already hard at work with OUSA lobbying the Ford government about changes to tuition, ancillary fees (he's the reason UPASS is protected!), and OSAP, as well as providing information and context to students potentially affected by these changes. Matt is great at keeping the pressure on the University and government officials, following up with and seeking student commentary, and is as complete and thorough a person as we could ever ask for. We highly encourage you to check him out at [vped-matt.com](http://vped-matt.com)!

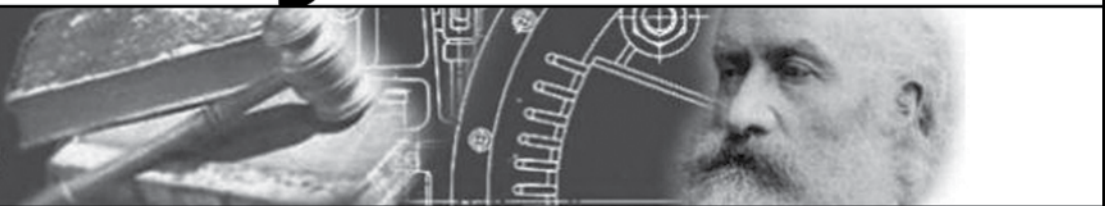
If you'd like to learn more about Team Ignite, you can find us online at Facebook: [UWignite](https://www.facebook.com/UWignite)



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## John Fisher & Roy Duxbury Leadership Awards

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

Nominations for these awards can originate from student groups, faculty members, or other individuals. Letters of Support from colleagues, faculty, and others familiar with the nominee's accomplishments are extremely important and form the major basis upon which the Executive Committee of the Sandford Fleming Foundation will form its decision. Nominations must be submitted to the Foundation by April 1, 2019.

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

**Nominations Must be Submitted to SFF Office Manager by April 1, 2019**

**E2-3336, Extension 84008, [sff@engmail.uwaterlo.ca](mailto:sff@engmail.uwaterlo.ca)  
[www.eng.uwaterloo.ca/~sff](http://www.eng.uwaterloo.ca/~sff)**

# Innovation: More Than a Buzzword



**ALINA PAVEL**  
2T NANOTECHNOLOGY

It's happening. You've definitely already heard about it. IoT, Cloud computing, Quantum computing, Big Data, Blockchain, AI, VR, Machine Learning, etc. Now more than ever before, you'll see [insert buzzword here] in various company press releases and in the headlines of almost every tech article, promising 'disruption' and 'innovation' (and sometimes even 'disruptive innovation!'), but are these just empty promises, being called out to gain the attention of stakeholders and potential investors?

In the past few years, technologies such as AR/VR have gained traction in the gaming industry, although they would provide numerous benefits for sectors such as health and military. Blockchain technology is now starting to appear in areas other than cryptocurrencies, such as healthcare, supply chain management, and more. Big data and analytics coupled with machine learning have helped many companies make smarter business decisions in order to promote growth. The point is, these technologies have so much potential to change our world for the better.

Imagine the world of Industry 4.0, where IoT allows devices and plant equipment to communicate seamlessly. Where an engineer or operator could receive a malfunction alarm in real-time from a plant that is hundreds of kilometres away, and be able to monitor and troubleshoot that equipment via their smartphone. With AI, we could even have equipment smart enough to shut down and troubleshoot itself. Analytics can help make production more efficient by optimizing the use of energy and materials to cut down on waste and defects. This vision is within reach, and some companies are already starting to

implement 'smart' factories.

But the majority of progress is slow. Getting every company – especially well-established ones – to adopt these new technologies, is much more challenging. There's just too much at stake, and most companies are more concerned with turning a quarterly profit to appease shareholders. Large companies are structured to be stable and sustainable, so it is hard for innovation to ripple through as it does in small companies and startups. It is hard to fit a new piece into a mosaic that has already been finished – many other pieces need to be moved.

Take, for example, a large industrial company who has recently acquired a smaller tech company that provides AR solutions for manufacturing. They hope that they will be able to integrate the smaller company's technology into their own framework. This integration is where the challenge lies; most of the workforce is not familiar with the potential of AR, so it is difficult to see where it can fit within their infrastructure. It also appears that the costs outweigh the benefits, as outfitting a single plant worker with a Microsoft HoloLens costs about \$5,000, and for what? So they can see instructions right in front of their face instead of turning their head a few degrees to look at a screen or sheet of paper?

Let's say they start using this HoloLens system for real-time training or troubleshooting. They would need engineers that are capable of developing and using AR applications, so those engineers would need training as well, which requires more time alongside their day-to-day work. Extend this process into other teams, and eventually to different global locations within the same company – it will take time for everyone to catch up.

This is a relatively small example though, in the context of multi-million dollar corporations. Larger changes, such as converting a factory into a smart factory needs to account for other things; the roles of existing workers, data security,

continuity and reliability, revenue stream, etc. There are many pieces to the puzzle, which all need to be planned out carefully in order to ensure smooth sailing into the 'future.' Either way, such a large-scale change is a big risk to take, which means an 'all hands on deck' approach is probably the best way to move forward – which means getting everybody involved.

## Making Innovation Work

Startups seem to have the 'innovation' thing down because they are idea-oriented. Startups must push forward with this idea despite the high-risk environment because if they can't, they'll crash and burn. This means they need to constantly seek solutions for the problems they encounter on the way, all while lacking capital.

What big companies do have, for the most part, is capital. This added layer of financial security means that companies should be able to take more risks – maybe they could innovate even better without the fear of crashing and burning. The modern corporation could learn a few things from how startups are structured. Not just in a 'free massages' and 'ping-pong tournaments' kind of way.

What successful startups get right is that all members work cohesively as a team and they use an entrepreneurial mindset – they are always seeking new solutions. Sadly, many workers in large companies often feel as though they are just a small cog in a large machine, that they have no real effect on the state of the company. The motivation to innovate and to implement new technologies needs to come from within the individual, not just from upper management spewing fancy buzzwords at team meetings. But how can we change the mindset of an entire workforce?

Really, innovation needs some sort of breeding ground. The right environment can go a long way, and cubicles just won't cut it. What about a sharable 'Innovation Space'? A place where any worker could go and contribute new ideas, collaborate

with others, or just learn new skills. Let's face it, not every employee is busy for all 8 hours of the workday. After finishing their important work tasks, if a worker finds themselves with not much to do, they could visit an 'Innovation Space' and use their brainpower to do more for the company. Designers and architects say that an 'Innovation Space' could even reduce stress among workers.

This setup would allow employees from all departments and backgrounds to come to collaborate and share ideas, which would add a sort of 'open source' aspect to projects. Anyone who is skilled with a particular tool or software, no matter what department they work for, could complete a specific task. This is opposite to the traditional approach, where a team or department has their own project to complete, and there is no way for people outside of the project team to contribute, even if they have the necessary skills. Using our HoloLens example from earlier, instead of training busy engineers to develop AR applications, other workers could learn this skill in their free time, and even find more uses of this technology within their own teams and departments.

To add more appeal to this ideology, incentives could be considered. Some companies already incentivize good work and behaviour with points systems, and expanding this system to reward fresh ideas and collaboration would be a win-win scenario for both the corporation and the individual.

The moral of the story is that in a rapidly-evolving technological climate, some companies need to do more to keep up. There are many breakthroughs that have been made in the past decade which could substantially benefit our species. Utilizing these technologies to their fullest capacity requires an effort from all employees, not just from upper management. Big companies should take some pointers from the way startups handle their business, and give individual employees the option to work in the way that works best for them.

# The Nightmare of Fatbergs



**ALINA PAVEL**  
2T NANOTECHNOLOGY

Don't dump your oils down the sink, people!

Among the many work-related horror stories told to me by my father (he worked in the wastewater treatment industry for many years), a couple of them really stuck with me. He once told me how massive pumps and motors often stop working because of clumps of dental floss that end up getting tangled in the moving parts, causing them to jam. The lesson? Don't flush your used floss down the toilet.

The most terrifying tale of all, however, is the one of the Fatberg. If this is the first time you've heard of a Fatberg, don't worry, I'll bring you up to speed. Actually, do worry, because this is probably going to spoil your appetite.

Lurking deep in the channels of your local sewer system, lies a great big mass of congealed fats, oils, and greases (FOGs) commonly referred to as a Fatberg. These masses accumulate when the fats calcify and harden up, causing even more FOGs to attach and build up. Even worse, these 'bergs can harbour other waste, such as wet wipes, condoms (ugh), needles (double ugh), dead pet fishes (aw), and anything

else that can be flushed down a toilet. The scariest part is that certain types of bacteria thrive in these environments, and have become resistant to antibiotics as well.

Unfortunately, these big nasty bunches of trash can block sewers and cause them to overflow. Since they become as solid as concrete, removing them is a painstaking process which often takes several weeks.

The most recent one found – a 64 metre long giant in Sidmouth, England – will take a reported eight weeks to clear up. For comparison, that's longer than a Boeing 747. In 2017, the largest Fatberg ever recorded was found in an east London sewer. It was 250 metres long, weighed about 130 metric tons and took nine weeks to fully remove. This Fatberg even created so much buzz in the news that a piece of it was kept and displayed at the Museum of London, attracting more visitors.

Fatbergs have become increasingly common, one likely reason is misleading advertising on consumer products. Many sanitary products claim that they are 'flushable', when in fact, they're not. I mean, just because you can flush your AirPods down the toilet, doesn't mean you should (no matter how much 'clout' that gets you).

Lesson? Don't pour your FOGs down the drain, and don't flush anything weird! Let your FOGs cool and solidify, then scrape them into a green bin. Let's eliminate Fatbergs, one wet wipe at a time!

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# Tunnels of Death and Collecting Rocks

## Welcome to a New Column About Stuff I Did at Work



**GABRIELLE KLEMT**  
3B GEOLOGICAL

FROM THE DESK OF A CO-OP

If you've never done a co-op, you might not have a real understanding of what happens at work. It might be hard for you to imagine what happens after that first week of dressing up, learning peoples' names, joining the coffee club and finishing all the paperwork and readings your boss gives you. Yes, much of the time you may be busy with work or projects, sometimes you'll even do overtime or work weekends to get things done. You'll also have days where you really have absolutely nothing to do, despite your best efforts. Obviously, you should not waste company time, but sometimes there is no work for you. And sometimes the work you are assigned to do is totally out of what you expected. Below are some of the various things I've done on

work terms.

Reading is quite obvious because it's an easy way to pass the time for most people. What most people haven't done is read the entire *Game of Thrones* series out of sheer lack of work. That's 4,197 pages of content (and yes, I was reading on my commutes as well, but that's no small feat).

I once knitted a pair of socks on the job. I once worked at a construction site where I was used to doing testing. They didn't always need tests though, so when I was waiting around, I got two full socks made! They are very warm and cosy.

Podcasts are a great way to amuse yourself when the work you're given to do is fairly mundane and requires relatively little brain power. I have listened to several fantastic podcasts including *The Bugle*, *the Allusionist*, *Ologies*, *the Daily Zeitgeist*, and *the Omnibus* to name a few. Go check 'em out if you want a brain boost!

I was once paid to be mosquito food. I did other things too, but that part is very vivid in my memory.

I once spent two months calling contract assistants to ask them how much rock they used in their road construction projects. Every morning I would come into work, get comfy, and spend an hour making phone calls and leaving voicemails. Every morning, because a lot of people never picked up.

I once was asked to spend three days reading absolutely everything I could about major tunnelling projects and failures around the world. I read scientific papers, I google-translated a lot of Russian and Chinese, and I signed up for a monthly tunnelling e-letter. I also found a video of the Russian tunnel of death. I did not make that name up, folks, this is legit and terrifying and you should also see this video.

I once spent so much time reading the corporate emails at a company, you know the ones every company emails out about updates and promotions and whatnot that no one reads, that I found out about the Green Society at the office building I was in, joined it, and helped them plan a potluck

fundraiser.

Once, trying to spend some time outside the office building, I joined in with some "tree week" celebrations. I wound up meeting the Minister of Natural Resources and had my picture up on the company intranet homepage for a month.

I once had so little to do, I tried to teach myself soil mechanics at work and turned it into my work term report.

I once spent an entire work term living in a cabin by a highway with four other people. We played Catan every day and I became a rock hoarder, I'm still working through it.

Co-op can be nerve-wracking and a little intimidating, but we've all been there and we all have different experiences. If you want to know what someone's co-op experience has been like don't ask them where they worked or what projects they did, that's the boring interview question and there's nothing of interest in the answer. Ask them what weird things they've done on co-op or been asked to do, we all have stories and they're always fun to hear.

## How Can You Help?

### Being Aware of Mental Health Around You



**MRIDU WALIA**  
MECHANICAL

HAKUNA MATATA

Hi guys! My name is Mridu Walia and I am in Mechanical Engineering. My column will be focusing mainly on topics relating to mental health. So, I don't know about you guys, but the low temperatures and extreme wind chill these days are giving me a mild case of the "winter blues". Some commonly experienced symptoms would be feeling fatigued, binging on carbs, and being dispassionate about things. We can't do anything about the state of the weather; however, we can be more aware of the mental state and well-being of our friends and family and take steps to ensure we are looking out for them. I'd like to share an anecdote I came across on Reddit recently to better explain what exactly I'm talking about. A UWaterloo student recently shared in a Reddit post that he had been really depressed and was feeling emotionally exhausted one day. He was in his room when his neighbour, who had ordered some takeout, knocked at his door at night. She offered him a box of churros that the restaurant had accidentally sent her. He felt overwhelmed by her random act of kindness and shared that this incident made him feel better.

You might be wondering why this is

important. According to the Canadian Mental Health Association (CMHA), 1 in 5 people in Canada experience a mental health problem or illness. It is estimated that 10-20% of the Canadian youth suffer from mental health issues such as depression or anxiety. It is estimated that about 50% of these people do not seek help from a mental health professional or doctor. This is exactly why we need to step up and be more aware of the people around us. No one knows what someone might be going through, so we should get into the habit of giving them the benefit of the doubt. Be kind to the people in your life and offer to help out if it's conveniently possible for you to. We don't realize how much of a difference we can make in someone's life by simply being kind.

Do you know someone, maybe a friend or perhaps a roommate, who has been noticeably withdrawn (socially), or claims that they haven't been sleeping well, or misses classes on a regular basis? I ask you this because these are very common and discernible signs of depression. Depression is a medical condition that affects a person's moods, and impacts what they think about themselves and how they interact with the people around them. It can sometimes require treatment with medication and/or cognitive-behavioural therapy (CBT). CBT mainly focuses on understanding how external events can affect a person's thoughts to provoke emotions and result in behaviours

exhibited by them. So, if you can think of someone who might be showing signs of depression, let's talk about some things you could do to help them.

Firstly, and I cannot stress this enough, be more aware of the people around you. We are all constantly hooked on to our phone screens, whether it is to check Instagram for a recent celebrity post, maintain streaks on Snapchat, or listen to that new Ariana Grande song on Spotify. And while all of that is okay, we should consider doing that during our leisure time, not whilst you're among a group of friends. Look around your class and if you see someone who is sitting alone, consider striking up a conversation with them. I am not saying assume they are depressed if they are alone; however, acknowledge the fact that they might be having trouble opening up to people. I am simply saying: be nice to people, just because you can be!

Secondly, if you know someone who might be depressed, check in with them to see how they are doing on a regular basis. Ask them about their day and whether or not you could offer them any emotional or practical support. What a depressed person needs is not sage advice, but your love and emotional support as they recover. Even if someone is not depressed, if you are concerned about their mental health encourage them to seek counselling. You cannot (and should not) provide them with a diagnosis; however, by offering some support or showing them that you care, you may be able to encourage them to seek help and recover.

Lastly, educate yourself about common mental health problems such as depression, anxiety, bipolar disorder, etc. This is crucial because you want to establish a safe environment for people suffering from poor mental health. You will be able to understand their experiences better as well as offer the right kind of support. Being an engineering student myself, I realize how university life can be taxing in terms of time and energy. The academics alone can be overwhelming and to top that off, we also need to proactively search for jobs and get involved in extracurriculars to make our resumes shine bright like diamonds. But even if you are busy, there are ways you can be helpful without having to go out of your way by simply adapting to the way you approach people. From

here on out, I will talk about some simple do's and don'ts that you should remember when dealing with people who are facing some kind of mental health problem.

Don't tell them to "get over it" or to "cheer up" and that all of it "is in your head". It is a real illness and requires real treatment combined with therapy for the person to recover. Even if you say those things with the best intentions, it will make the person feel as though they are choosing not to be happy. Instead, reassure them that you are "here to listen" and provide them judgement-free advice. Do encourage and motivate them to seek help. You can do this by helping them research some accessible resources ex. National crisis line, campus counsellors, walk-in clinics etc.

Don't minimize what they are going through by saying "things could be worse" or that you understand. You might have first-hand experience with depression, but it's important that you understand that it was unique to you. Similarly, this is a unique experience for them and by telling them you understand you can end up implying that this is a similar situation. Instead, share the positives from your experience i.e. what worked best for you and how it helped you in getting better.

In conclusion, if you know someone who is dealing with mental health issues, be patient with them as battling your own thoughts and instincts can be a very daunting. Give them your love and support, but also at the same time, do not neglect your own mental health as it can be exhausting. You will not be of much help to anyone if you are neglecting your own health in any way. To the people currently facing a mental health problem, I would like to say, your feelings are valid! I don't know what you're going through but I do understand that it can be exhausting and debilitating. Also, I just want to say to you that it gets better if you seek help. The help is out there for you, in the form of a close friend or mental health professionals, if you choose to reach out. Consider making an appointment with Counselling Services at Needles Hall or with a doctor at Health Services. I hope you feel better and find comfort in the knowledge that there is a lot of help out there for you to access and that there is a way out of it, but it will require you to stay determined and strong.

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# Tweetbusters: Debunking Ford's Carbon Tax Tweets



**KIRSTEN EHLERS**  
1B BIOMEDICAL

For anyone out there who (like me) possibly inappropriately watch politics as their source of reality TV, you will be excited to hear that 2019 is cited to be the year of the carbon tax. This issue is set to be the hot topic of the upcoming election, and unfortunately ever-present on political twitter feeds.

Inspired by Trump's incorrect tweets of rhetoric in the states. I thought, let's take a Canadian perspective on twitter in politics.

On January 22nd, Doug Ford tweeted:

"Every decision we make is driven by our commitment to create and protect good jobs here in Ontario. That's why we're cutting red tape to reduce costs for our businesses, and fighting the job-killing carbon tax to ensure they remain competitive. #onpoli"

One area of focus is the "job-killing

carbon tax". That line has been completely blown out of proportion, not only by Ford but by the NDP as well. Nick Rowe, an associate professor in economics at Carlton University, stated policy change, which includes a carbon tax, most likely doesn't affect employment. Policies may affect wages and potentially unemployment in the open sector. However, policy changes often see an increase in employment in another sector. Even with this small job loss, the effect is negligible on the overall economy because 200 000 Ontarians lose or leave their jobs every month. Additionally, BC has had a direct carbon pricing plan since 2008 and it created jobs.

Later that day, Doug Ford tweeted something even more outlandish:

"It's hard to believe economists with theories that making everything more expensive is a good idea. The threat of a carbon tax recession is real. The cost of goods that are made, farmed + transported in Ontario will go up with a carbon tax. The price will be paid by Ontarians."

There's a lot to unpack here. First of all, the threat of the carbon tax recession is not real. Economists believe that the impact of the carbon tax is negligible on the economy. Economists and their theories have degrees and education. They study economics for a living. I think it's fair to say they probably know more than Doug Ford about trends in the national economy. Yes, the carbon tax will shrink the economy by \$3 billion. However, the director of economics at the Conference Board of Canada, Matthew Stewart said that \$3 billion is 0.14% of the economy. Moreover, Dale Beugin, executive director at Ecofiscal explained that a loss of \$3 billion is not negative growth but \$3 billion less growth. The economy is still strong. There is still growth. There is no real threat of a carbon tax recession. I can't deny that Canadians will have to pay more. However, there are rebates. The average Ontarian will have to pay an extra \$300 but will get a rebate of \$244. This cost is significant to low-income households. However, maybe Doug Ford

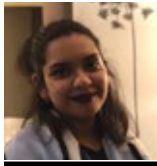
should be introducing welfare programs for low-income communities instead of rage-tweeting about the carbon tax.

What's in common with these tweets? Hyperbole. Doug Ford is severely overestimating the damage of this carbon tax. The danger of this is that the carbon tax is really important to reduce carbon emissions. Climate change is a problem and Canadians have to do something. Either pay for it in a carbon tax now or for generations to come.

Now, it is important to note that the carbon tax will not solve the world's climate problems. It won't even allow Canada to meet its targets for Paris agreement. However, if every time Ottawa tries to do something about climate change, Doug Ford puts up a fight, it will cause a global climate disaster in the next five years. Now that's a hyperbole. It sounds weird, right?

My advice to readers: read political tweets carefully, chances are there's something that's been a little exaggerated to make a point.

## My Knight's Shining Armour is Tin Foil



**SAMRIDHI SHARMA**  
3B CHEMICAL

**DID SHE JUST SAY THE F-WORD?**

As a child, I was completely in love with this fairy tale called Rapunzel. You've heard about it. The one the movie Tangled is based on? I loved it so much, and I think it wasn't because I loved the story as much as I loved the feel of the thick pages against my fingers. But I still loved the story and here is a rundown:

Rapunzel is trapped in a tall tower and

needs to escape. A knight sees this and asks her to lower her long locks that reach the bottom of the tower. (I know, right?) The knight uses her hair like a rope, climbs to the top of the tower, and ends up rescuing her. There, all caught up.

The more I think about this, the more it baffles me. Was it just the idea of being rescued that made me love this story so much? Was it the extremely weird and unattainable standard of beauty? You know, the long, blonde locks.

As a young girl with a very malleable mind, my fairy tales did not reflect who I was supposed to be as an adult. I think this

is a gap that society is slowly bridging. We are moving away from the classic renditions of old German tales with slightly more palatable endings. Don't get me wrong, I still think Sleeping Beauty is twisted. However, everyone dying is not a better ending in any way.

We need to find a balance between everyone dying in gruesome ways, and everyone living happily ever after post the wedding of the prince with the princess. New fairy tale renditions like Tangled and Frozen are doing just that.

We need to realize that we are raising children to be world leaders, CEOs, doctors,

engineers, scientists, and whatnot, and what they are taught as children really affects who they become as adults. Teach your girls that they do not need a kiss on the lips to wake up from a coma. Well, not literally that, but teach them that they can rescue themselves, and even slay dragons, if needed. Draw morals from books like Nancy Drew, where girls will see a smarter representation of themselves rather than a prettier one. Teach your boys to vocalize their feelings. Teach them that the pen is mightier than the sword and that wits can overcome any challenges. Make your own fairy tales, and I urge you to use the existing ones with caution.



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# Pick Your Poison: Trade War or Nuclear War?



We are back once again with “Damnit Donald”, chronicling the absurdities and scrapes which have characterized every day of Donald Trump’s presidency.

## An Update on the Shutdown

A temporary funding agreement signed on Friday, January 25 ended the longest government shutdown in American history. This measure funds the government for three weeks, allowing employees to finally be paid, and does not include any money for the border wall.

Since December, the Democrats had insisted that Trump temporarily reopen the government before they will consider discussing border wall funding; while it took five weeks, Trump eventually realized that they would not concede while the government remained shut down.

Another factor in his decision was the toll reported by various government agencies, including air travel and law enforcement, when employees refused to come into work.

On Friday night, the House and the Senate unanimously passed a bill to temporarily reopen the government, which Trump signed. This comes three days after he adamantly said, “We will not Cave!” and one day after he insisted on a “prorated down payment” on the wall as a compromise. No down payment was made.

Trump said he was “very proud to announce” the agreement in his Rose Garden speech, not admitting defeat. He tweeted: “I wish people would read or listen to my words on the Border Wall. This was in no way a concession. It was taking care of millions of people who were getting badly hurt by the Shutdown.”

He also hinted – although “hinted” is used loosely here, as we all know Trump’s degree of subtlety – at the alternative course of action he has as his disposal. “As everyone knows I have a very powerful alternative but I’m not going to use it at this time.”

He could exploit his position as Commander in Chief to call a state of emergency, thereby bypassing Congress and allocating military funds for the southern border wall. According to CNN, this document has already been drafted, involving up to billions of dollars.

In a comment just short of a threat, Trump said: “We really have no choice but to build a powerful wall or steel barrier. If we don’t get a fair deal from Congress, the government will either shut down on February 15 again, or I will use the powers afforded to me under the laws and the Constitution of the United States to address this emergency... We will have great security.”

However, such action would provoke constitutional uproar and legal challenges. While Trump is unpredictable at best, a state of emergency appears unlikely.

This is seen as a victory for the Democrats, especially for Speaker of the House Nancy Pelosi, who only came into this post three weeks ago. She said, “Our unity is our power – and that is maybe what the President underestimated.” Democrats have praised her refusal to back down.

When asked if there will be another shutdown, Pelosi said, “I can’t assure the public about anything that the President will do, but I do have to say I’m optimistic.”

Trump is also optimistic, although on the opposite front. “I think we have a good chance... We’ll work with the Democrats and negotiate and if we can’t do that, then we’ll do a – obviously, we’ll do the emer-

gency because that’s what it is. It’s a national emergency.”

In his speech in the Rose Garden, Trump thanked the employees, who he called “incredible patriots”, for their “devotion in the face of this recent hardship.” He assured them that they would receive their missed pay cheques in full, and as soon as possible.

Trump finally caved when he heard stories of law enforcement officials unable to do their job properly, according to an administration official who spoke with Reuters on the condition of anonymity. He had also been facing pressure from Republican lawmakers to end the shutdown. Even in December, Republican Senate majority leader Mitch McConnell warned him that the Democrats would not give in.

There were also major issues in the travel industry – hundreds of flights in New York and Philadelphia were grounded or delayed because air traffic controllers were calling in sick. 26,000 IRS workers were called into work last week to deal with the impending tax season, but over half refused to go in.

Over the past five weeks, 800,000 federal workers were either furloughed or forced to work without pay, accounting for about a quarter of the federal government. Many turned to unemployment assistance, food banks, and other support. For context, an estimated 40% of adults do not have the funds to cover an unexpected \$400 expense; two missed paycheques is incredibly straining.

FBI Director Christopher Wray called the shutdown: “mind-boggling”, “short-sighted”, and “unfair”.

The southern border wall was a campaign promise, and it has been a point of contention since the beginning. Trump says it is needed to prevent illegal immigration and drug trafficking, while the Democrats argue that it is ineffective, costly, and immoral. His vision of its design is quite enlightened: “The walls we are building are not medieval walls. They are smart walls designed to meet the needs of front-line border agents and are operationally effective. These barriers are made of steel, have see-through visibility, which is very important, and are equipped with sensors, monitors and cutting-edge technology, including state-of-the-art drones.”

## Trade Deals with China

On Thursday, January 31, US Trade Representative Robert Lighthizer met with Chinese Vice Premier Liu He, concluding two days of high-level trade talks in Washington DC. No deal was reached, but Xinhua news agency reported that China’s

trade delegation called the talks “candid, specific and fruitful”, saying that they made “important progress”.

China agreed to purchase an additional five million tonnes of soybeans and followed through on this promise on Friday. Trump said this would “make our farmers very happy”, as they had suffered from the loss of their largest customer. In 2017, China imported over thirty million tonnes of soybeans; analysts say these numbers may never be reached again.

Lighthizer told reporters that America’s goal is to make China’s commitments “more specific, all-encompassing and enforceable.” Lifting tariffs was not part of the talks.

Trump says he plans to meet with President Xi Jinping in the coming weeks, although no specific plans for the meeting were announced. However, he is optimistic that they could reach “the biggest deal ever made.” US trade negotiators will visit China in mid-February for further discussion.

The US and China are involved in a trade war which led to \$360 billion in new tariffs last year. On December 1, Trump met President Xi in Buenos Aires, agreeing to a 90-day truce in which there would be no escalation in tariffs. That deadline expires on March 1, when the White House will enforce a tariff increase from 10% to 25% on \$200 billion worth of Chinese goods. Economists say this would be a big blow to the global economy, as these are the world’s two biggest economies.

Lighthizer said at the Oval Office meeting: “At this point, it’s impossible for me to predict success but we are in a place that, if things work, it could happen.” This conclusion is as convoluted as Trump’s tend to be.

There are two major issues related to the trade discussions: intellectual property protection and forced technology transfer. While Chinese negotiators discussed these core issues in the initial talks, they did not propose a compromise.

One potential outcome is that China will purchase more American products, including natural gas and agricultural goods, which would help to reduce the deficit. Last month, Treasury Secretary Steven Mnuchin told CNBC: “They put on the table an offer of over \$1.2 trillion in additional commitments. But the details of that still need to be negotiated. ... This isn’t just about buying things. This is about opening markets to US companies and protecting US technology. Those are very important structural issues to [Trump].”

This would be a strategic move on China’s part; by extending an olive branch, Trump could claim a victory while Chinese

interests are maintained.

The US is accusing China of stealing technology patents, copyrights, and trade secrets in IP to boost its economy. China denies this. Last Monday, the US Department of Justice charged Huawei with stealing trade secrets from T-Mobile and violating US sanctions against selling to Iran. Huawei denies this.

Al Jazeera’s Adrian Brown noted: “It remains to be seen whether a deal can be done between the two sides if Meng remains under house arrest in Canada pending extradition to the US.”

## Nuclear Arms Treaty Falls Apart

This weekend, the US government announced its withdrawal from the nuclear arms control treaty due to alleged Russian non-compliance. Their withdrawal officially takes effect in six months, giving Russia a window of time in which to save the treaty. Instead, they followed suit, withdrawing the following day.

US Secretary of State Mike Pompeo said: “We have raised Russia’s non-compliance with Russian officials — including at the highest levels of government — more than 30 times. We have provided Russia an ample window of time to mend its way. Tomorrow that time runs out.”

In early December, the US said they would give Russia sixty days to destroy any weapons which they claim violate the treaty; that deadline expired on Saturday.

NATO Secretary General Jens Stoltenberg said Russia was “in material breach” of the treaty, saying that NATO “fully supports the US suspension [and] notification of withdrawal from the treaty.”

In a written statement issued by the White House, Trump said that Russia has violated the treaty “with impunity, covertly developing and fielding a prohibited missile system that poses a direct threat to our allies and troops abroad”, while the US has “fully adhered” to it.

He said on Friday that he is open to negotiating a wider agreement, possibly one which includes other countries: “I hope that we’re able to get everybody in a big and beautiful room and do a new treaty that would be much better. Certainly, I would like to see that.”

The Intermediate-Range Nuclear Forces Treaty (INF) bans ground-launched cruise missiles in the range of 500 to 5000 km. It was established in 1987, following the Cold War.

Nuclear weapons experts at the Carnegie Endowment for International Peace said that US withdrawal from the INF treaty will likely be counterproductive.

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# Finding Happiness in Competitive Places



**ASHLEY CLARK**  
VP STUDENT LIFE

Hello again everyone! I hope the first few weeks of the term have been going well. As the midterm season approaches, I want to spend this article focusing on mental health and positive ways to cope with competition, stress, and comparing yourself to classmates.

Being a student in Waterloo Engineering is an amazing journey. One of the best parts about Waterloo Engineering is the opportunity to be a part of a community of some of the brightest minds in the world. However, that's not to say that being in Waterloo Engineering doesn't have its hard times too. I've often felt isolated here, and I feel that

as students we compare ourselves to each other way too often. I think that healthy competition can be a good thing, but when the competition becomes something that makes you perceive yourself or others in a negative way it's no longer healthy.

I've dealt with this first hand. I get grades that are below average (but passing) and I feel as though it takes me twice as long to understand concepts as it does for my classmates (but I usually get there in the end). I often need extra help, and I reach out and ask for it. I am comfortable with all of these facts now, and I work to better myself every day.

However, the time in my life when I was the most unhappy was also the time in my life when I compared myself to my classmates the most. So I wanted to share this story for anyone who might read my articles, in the hope that I can help at least

one of you.

I spent the first three years at university being ashamed of myself for not being as good as my classmates. None of these things has changed. I still receive below average grades. It still takes me a long time to understand new concepts. I still feel unprepared for a quiz every now and then. However, I am a lot happier now and there are some things I discovered along the way.

My version of good is not the same as everyone around me, nor should it be. When I finally understand a concept that I struggled with, raise a mark in a particularly difficult class or get an assignment back with feedback that I understand, I am proud. I deserve to be, I'm improving from the place where I started.

I excel at things outside of class, and I will not receive stellar grades unless I quit

doing the things that I love. I am a part-time TA, VP Student Life, and a very loving fish mom. If I dropped even one of those activities I could probably focus that time on class and get better grades, but I wouldn't be nearly as happy.

My happiest is when I make time for my friends and family, and especially when I stop comparing my grades to those around me. So I leave those situations if I can, and I don't take part in them when they happen around me.

It might seem like I've chosen to ignore my problems instead of working harder to solve them. But I like to think instead that I choose to focus on what's most important to me, what I value in my life the most, and what makes me happy. I hope that if you're in the same situation that you can take a step back and decide what matters to you the most too.

## Chug Chug Chugging Along



**MICHAEL BEAUCHEMIN**  
VP FINANCE

Some exciting things have happened since last we spoke! The RidgidWare Grand Opening was a HUGE success!! So many people showed up and the Dean spoke and said some really amazing things. RidgidWare is open and is already getting a lot of feedback on stock choices and what we can do to improve and that's super exciting. It will give my successor a clear goal for sure!

Coverall sales are done and the

coveralls order has been placed. We sold 20 pairs of coveralls over 3 days, thanks to all who showed up. They should be coming in a little after reading week this term!

Josh Taerk Music has asked to come play POETS! I'm going to ask them if they understand where and what POETS is, and if they're still game, they might come by for a licensed Upper Year Appreciation Event! This event will be happening sometime in March, hopefully, and it will be a 19+ event! If you have any comments, questions, or concerns, please reach out to me by email.

I don't know if you noticed, but POETS has new couches in! It's looking

pretty full right now if you haven't been by. We're looking to make it a little roomier and that means we're giving couches away! Some notes: Any undergraduate engineering student is eligible to apply for a couch from the Waterloo Engineering Society on behalf of a student group, team, or lounge. The couches must not leave the University of Waterloo campus. The couches must also reside in an engineering building. All transportation of a couch, if received, is the responsibility of the applicant. Applications are available at [bit.ly/CouchApplications](http://bit.ly/CouchApplications)

The All Societies Assembly on Jan 20th was a huge success! I got to meet

with VPs Finance from all over and we talked about money and money things. Lots of ideas were shared and I have been thanked by some of the others, particularly for ideas relating to sustainability!

Last, and definitely not least, Sponsorship Applications are open!! The Committee has been elected, the allocations meeting is set for March 16th, and applications are due on March 14th! Any Student Group or Team may apply to receive funding but must be able to send a representative to POETS (CPH 1337) on Saturday, March 16th. If you have questions or comments, please email me!

## Meet Your Presidential Candidates!

Ellen McGee



**ELLEN MCGEE**  
CANDIDATE PRESIDENT

Hey there! My name is Ellen McGee, I am in 2A Systems Design Engineering and I am running to be your next Engineering Society president!

I got started in the Engineering Society in 1A by going to council meetings and attending events. The next term I was a director and got to run Coffee House, Canada Day, and Novelties. In the fall, I was a Big orientation week leader. I am now Social and Events Commissioner and sit on the Board of Directors.

I'm running to be EngSoc president because I love EngSoc and I love the engineering community at Waterloo. I've been

fairly involved over the last few terms and want to do even more for EngSoc. I'm passionate and have a lot of ideas for different initiatives and ways to enhance the EngSoc community. The main things I want to accomplish as President are to build a strong community, get more first years involved, and have more online mental health services available to students.

My goal for building a strong community is to make everyone feel welcome. Right now, engineering spaces and EngSoc events can often feel very exclusive. You're either in EngSoc, or you're out. I want to change that. I want anyone and everyone to feel like they belong in the Engineering Community because they do. I want to make EngSoc a welcoming environment for ALL engineering students, without losing the closeness of

the community. I would like to do this by continuing the planning and implementation of the "Earn your coveralls" program that the current executives are starting. I would like to have more events that appeal to large amounts of people. One idea is to have POETS open once a week in the evenings as a quiet study space and have snacks provided.

I would also like to get more first years involved in the Engineering Society. First years are the future. Awesome first years turn into awesome upper years. So getting first years involved in the Engineering Society is pivotal for the existence of the society, but it's often unknown to first years how to get involved, or intimidating to do so. I want to make it easier for first years to get involved in society and meet friends and upper-years within the EngSoc community.

One way I would like to do this is to revamp the shadow director program. First years will be able to get involved with directorships right in their first term of school by creating a program that advertises the different opportunities EngSoc has and help them get involved right away. I would also like to create a mentorship program that has BOT, MOT and EOT events will help them meet upper-year mentors/friends.

I would like to revamp EngSoc's mental health online resources by moving them to a more prominent location on the website. I would also like to provide more online mental health resources so students can easily access resources when they need to.

If you see me around feel free to ask me questions or check out my website at [ellen4prez.ca](http://ellen4prez.ca). Make sure you are voting at [vote.feds.ca](http://vote.feds.ca) on Feb 1-5! Thanks!

Derek Broekhoven



**DEREK BROEKHOVEN**  
CANDIDATE PRESIDENT

Hey there! My name is Derek Broekhoven, and I want to be your Engineering Society's president for the Fall of 2019 and the Spring of 2020. I am currently a 2A Mechatronics Engineering student. Through directorships, sitting on council, and getting to know people who are involved, I have gained a lot of experience and knowledge about how the society runs and some of the best practices. Most of my experience is through running events: TalEng, Semi, and Genius Bowl.

This term, I am going through the process of building the Community Service and Patch Auction directorships. I have had a lot of fun so far doing these things, and I am looking forward to the outcome of these. I want to increase the community service done by the Engineering Society, as that has many positive effects on both the people doing the service and the people receiving the service. I also want to work with my executive team to implement more structured feedback plans throughout the term so as to optimize events for everyone in the society so that everyone can have fun at events like Semi Formal, TalEng, etc.

Mental health is obviously an extremely important topic. At Waterloo, school gets very stressful, and it is our job to help

whoever is struggling. A lot of work is being done by the current executive team, but I would like to do even more. I would like to implement resources online that can tell people where the best place to go on campus might be for them based on what they are struggling with. This will help to increase awareness of the various services that we have on campus. I believe that this will make it easier for people to get help when they need it, as well as how they need it. I want to start doing fairly regular check-ins, with open conversations about mental health and what is causing stress. This will allow people to speak openly about their issues and find out what others have done when they had similar issues. One of the biggest things that I've found to be tied to

mental health is physical activity. Even just a small amount of physical activity each day can really help with mental health, as well as help you study better. This is why I want to implement small incentives/mini competitions for things like reaching step goals.

I will advocate for all students across engineering, from first year to fourth year, and ensure that everyone's voice will be heard. If you elect me to be president, I will represent you in every way I can. If you have any questions for me regarding my platform, or anything else really, feel free to send me a message on Facebook, email me, or come find me around POETS! Thanks for reading, and be sure to vote from February 1-5!



# Why Should You Care?

## Elections and How they Affect Your Student Experience



**KATIE ARNOLD**  
PRESIDENT

The average student has probably noticed that we have something of an election going on. Not only are we electing our new Engineering Society Executive, but we're also electing our new Federation of Students Executive and Council.

Elections come and go and people complain about the recently deceased and soon (hopefully) to be rejuvenated

Bomber, about how high the fees are, about mental health and academics, and sexual assault and harassment policies on campus.

Did you know there are students on campus right now whose whole job is to look after these concerns?

Your co-op and academic issues are largely tackled by the VPs Education or Academic. Your community and mental health issues are often tackled by your VPs Student Life. Your financial concerns (Where is my money going? What's happening to UPASS? Do we have student insurance and healthcare and

legal services?) are handled by your VPs Finance.

These are important issues. They affect us every day. They affect whether you're allowed to leave a co-op job when you're facing harassment, they affect what the co-op fee looks like, they affect how you get to class in the morning (busing), and they affect the mental health training your professors and teaching assistants receive.

So you've never voted in an election before, why should you now?

Because you should care about the things being decided by these leaders. Because your FedS President is part

of the conversation that decides what orientation week looks like. Because your FedS VP Operations and Finance are part of the conversation of what your health insurance looks like. Because your FedS VP Education is part of the provincial lobbying that dictates what your tuition and fees and sexual harassment policies look like. They also determine what kind of input we, the average student, have in the decision.

We all need to care about voting for FedS a little more because these people will make the decisions with or without us.

# Mental Health Focus Group Project Closed

## Reasons for the Decisions



**BENJAMIN BEELEN**  
VP ACADEMIC

First of all, thank you for reading this article. My council updates are going to be a little weird cause I'm gonna have some guest speakers taking up more time than normal, so here is a more detailed idea of what I'm doing.

The most pressing update is that I have

closed the mental health focus group project which Katie and I were pushing for the past 7 months. I made the decision to close the group for a few reasons, but first is that there were not many people interested. We had a pretty rough turnout from the council and I believe from lack of advertising from class reps and myself to the general engineering population, we simply didn't attract enough people. It takes a lot of energy and time to run a focus group, and if it is just a small group of people I may as well work directly with those people instead of

wasting people's time with meetings.

I am still planning on supporting mental health within my portfolio, mostly through working with my mental health commissioner Quin and working with the MATES exec to ensure that MATES is here to stay and that the faculty understands the importance of peer to peer support networks.

Another reason I am closing the group is that it was not appearing to be sustainable past my term as VPA. I originally believed that I could develop a policy that would lay a foundation for the focus group

within EngSoc so that it could continue and pick up more ambitious goals. Based on feedback from within the group itself and personal reflection, it wasn't deemed important to ensure the group stuck around once I was gone, and the policy initiative was abandoned.

I hope the best for the future of mental health at Waterloo, I'm excited to see the initiatives of the presidential candidates and I can't wait to see what they are able to do with a new council and a new group of students.

# Waterloo Wins Big at OEC!!



**GRANT MITCHELL**  
VP COMMUNICATIONS

Congratulations on making it this far through the term. Can you believe we're already a third of the way through the term?

First off, let's start by saying that Waterloo Engineers are the best! Our teams cleaned up at the Ontario

Engineering Competition two weeks ago taking home a number of awards. Our teams placed 1st and 3rd in the Innovative Design as well as earning the Sanford Fleming Foundation Social Awareness Award. Our teams also won 1st and 3rd in Senior Design and one of our Junior Design teams took 2nd place. That means we will be sending 3 teams to the Canadian Engineering Competition located here at the University of Waterloo in March. Please wish them all luck as they go on to compete against the best

teams in Canada and hopefully win big once again.

On that note, the Canadian Engineering Competition is coming to Waterloo this March! I highly encourage everyone to look out for calls for volunteers for the competition. It's going to be an awesome event and it's a great opportunity to meet engineers from across the country and expand your network. Volunteering in any capacity promises to be a lot of fun!

Switching gears now, has anyone else noticed that the Engineering Society

has no LCD screens and no advertising boards in E7? Well, some of you did and boy did I hear about it. This term, one of my goals is to change that and I need your help. Do you spend a lot of time in E7, know where students like to hangout or have a master plan for E7? Let me know, these poster boards and LCDs are how we reach out to you, so I'd love to know where the best place is to do just that. If you have suggestions please feel free to come by CPH 1327 or drop me a line at [vpcomm.b@engsoc.uwaterloo.ca](mailto:vpcomm.b@engsoc.uwaterloo.ca).

## Upcoming Events Calendar

Wednesday Feb 6	Thursday Feb 7	Friday Feb 8	Saturday Feb 9	Sunday Feb 10	Monday Feb 11	Tuesday Feb 12	Check out up-to-the-day event postings on the EngSoc website at <a href="http://engsoc.uwaterloo.ca/event/calendar/">engsoc.uwaterloo.ca/event/calendar/</a>
EngSoc Council Meeting #3 5:30 PM - 7:00 PM E7 3353	Valentine Card Making 4:30 PM - 6:30 PM	Fourth Year Friday 12 PM - 4 PM POETS			EngiQueers 6 - 9 PM POETS	Puppies in POETS 7:00 PM - 9:00PM POETS	
Wednesday Feb 13	Thursday Feb 14	Friday Feb 15	Saturday Feb 16	Sunday Feb 17	Monday Feb 18	Tuesday Feb 19	
WiE Wednesday 5:30 PM - 7:30 PM E7 1331 & E7 1327 Valentine's Day Cookie Decorating Contest 7:00 PM - 9:00 PM			Dungeons and Dragons 1:30 PM - 5:30 PM POETS				

# Point Vs. Counterpoint

## Yoda is Smarter Than Spock

POINT

**KIRSTEN EHLERS**  
1B BIOMEDICAL

Smarter Yoda is than Spock.

This argument is inspired by a Waterloo paper by Igor Grossman, Harrison Oakes', and Henri Santos titled "Wise Reasoning Benefits from Emodiversity, Irrespective of Emotional Diversity" which argues that wise reasoning is benefited by a healthy sense of emotions in life. They back this argument up with observational, diary, and experimental studies. In their discussion, they conclude Yoda's emotional balance makes him wiser. However, does that make him smarter?

When considering these two popular science fiction characters, one can see a lot of similarities. Spock and Yoda both have strong logical thinking, problem-solving skills, and moral compass.

What sets Yoda apart from Spock is his wisdom. Yoda is wiser due to his age and experience. Yoda was just under 900 years old in the original trilogy, while Spock was 35 years old in the original TV series. This 865-year difference gives Yoda a strong advantage in terms of experience. He is able to utilize experience more than Spock to solve problems simply because he has it. As a result, he understands himself and the world better and can make wiser decisions.

However, wisdom is not intelligence. Wisdom is the making of good decisions using knowledge of one's self, experience, and ethical sensitivity.

Although, I am neither making the argument that Yoda is more intelligent or wiser than Spock. I am arguing that Yoda is smarter than Spock. For this argument, I am drawing on Howard Gardner's Theory of emotional intelligence.

Yoda's wisdom and experience give him a stronger interpersonal and intrapersonal intelligence. He is able to cope with emotions because he embraces them. He expresses his emotions including joy, sorrow, and regret. In contrast, Spock is unable to function with emotions. He suppresses emotions to favour logic. Consequently, when Spock feels emotions, he is unable to act appropriately. Consider Spock in "The Naked Time", episode four of the first season of the Star Trek television series. He is unable to protect his own crew from an infection spreading on the ship. His inability to contain his emotions after Nurse Chapel confesses her love for him results in Captain Kirk becoming infected. Logical reasoning is useless if it breaks down with emotion.

Spock has a slight disadvantage when it comes to emotions. His Vulcan ancestry makes his emotions very intense. That is why Vulcans repress their emotions. Otherwise, they'd be unable to function. Spock, with his human side, even lacks some skill in emotional repression. Thus, he is unable to regulate his emotions because they are so intense and unable to repress his emotions because he is human. However, just because Spock's ancestry is to blame doesn't make the aforementioned evidence false. It's just simply not Spock's fault that he can't be as smart as Yoda.

Yoda, however, is able to use his emotional experiences to his benefit. He uses his strong intrapersonal intelligence to interpret his own emotions. For instance, he explains to Ezra Bridger,

in Star Wars: The Clone Wars that it is a struggle to recognize fear and not turn it into anger. This is important because as we all know: "fear is the path to the dark side. Fear leads to anger. Anger leads to hate. Hate leads to suffering." Yoda's ability to recognize the downward spiral of being consumed by emotions while avoiding it shows a strong intrapersonal intelligence. Where does this come from? He had 900 years of experiences with emotions and wisdom to develop this skill.

As for his interpersonal intelligence, Yoda is able to deal with the conflict and frustration of his students. He is able to transfer his own emotional knowledge to them and watch their strong emotions through training without breaking down. It has made him a remarkable teacher. Again, this ability to deal with students

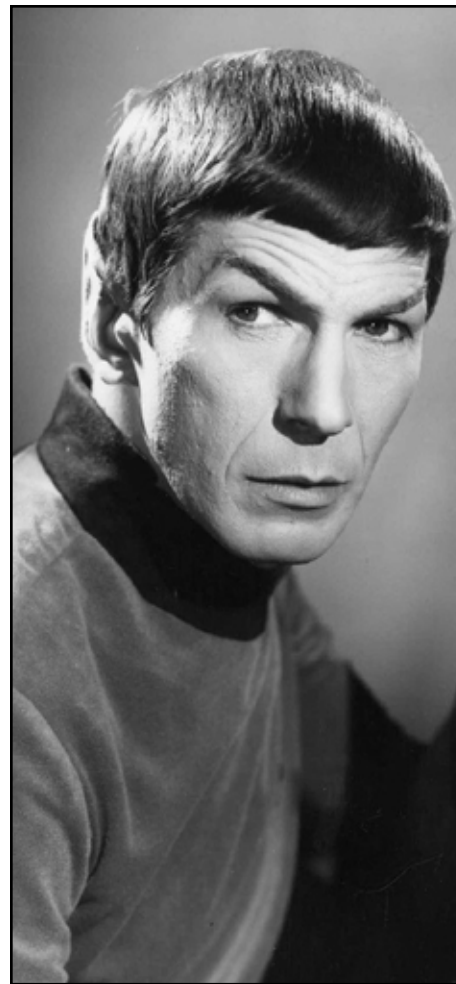


GPS via Wikimedia Commons

**RATAN VARGHESE**  
3A COMPUTER

A recent study from the University of Waterloo suggests that diverse emotional experience improves human's ability to reason, and also suggests that Yoda is wiser than Spock. Obviously, while Yoda might be a better model for human wisdom, since Vulcans and whatever Yoda is weren't included in the study, the study does not actually establish that Yoda is wiser than Spock. This has prompted a debate about the merits of Yoda over Spock in general. A debate that Yoda is sure to lose, unless someone delves into prequel and Extended Universe territory, which we probably shouldn't.

First of all, Yoda is barely capable of communicating a simple sentence without amusingly but annoyingly mangling it.



NBC Television via Wikimedia Commons

### Does wisdom or emotional distance make you smarter?

comes from his wisdom and experience.

One may argue that Yoda's famous odd phrasing makes him unintelligent. If Yoda isn't able to put together a proper sentence, how can he be considered smart? Actually, linguists argue that Yoda is speaking proper English. Shakespeare wrote "[f]or them the gracious Duncan have I murdered" in Macbeth and "Little Drummer Boy" contains the lyric: "[c]ome they told me, the newborn king to see". So why do people not criticize odd phrasing in these forms? It's art. Yoda's form of speech can still be understood, it just uses a different style. That doesn't make him unintelligent. Would anyone consider Shakespeare unintelligent because he mixes up his subjects and predicates?

It's easy to think that being smart means logic. However, Yoda is a clear example in pop culture exhibiting how being smart requires more than logic and rationality. It requires a balance.

Much of the wisdom he may possess is trapped inside his oblong skull. In comparison, Spock communicates clearly and unambiguously, avoiding the sort of value judgements a red-blooded human would insert into the conversation. When he speaks, all who listen can benefit from his wisdom, rather than just people who are simultaneously one with the Force and one with word puzzles. And people will trust his words as well, since unlike the Jedi, Vulcans don't lie (except when they do).

Perhaps this is why Spock is such a great team player, as compared to Yoda. While Yoda spends his time isolated in the swamps of Dagobah, Spock is collaborating with society for the betterment of the entire galaxy. Spock has genuine friends who respect his opinion: Kirk and Bones stick up for him even when he's not around. Meanwhile, Luke Skywalker ignored Yoda's most important piece of advice

COUNTERPOINT

and flew into the Empire's obvious trap. Yoda couldn't convince his greatest student to avoid disaster: he lacked the ability to clearly make his case.

Spock has incredible technical skill. His knowledge of spacecraft and computers saved the lives of countless sapients across the galaxy. Could Yoda prove that someone was altering a ship's computer tapes to frame someone? Spock could and did. Or will, depending on whether we're picking tenses based on broadcast date or the in-universe date. Anyway, Spock gets technology. If only he could do my upcoming VHDL labs, but alas, he probably prefers Verilog.

Being a professional in an organization as large as Starfleet requires a degree of style, and Spock is dressed to impress. Not only is his Starfleet uniform devoid of significant wear, but he retains a full head of hair even after ageing significantly and being flung into an alternate timeline. His personal grooming is nothing short of impeccable, especially compared to the likes of Yoda. You may be under the impression that Yoda is bald, but it is not so. Look at him closely, and you'll realize he has significant hair on the back of his head and growing out of his ears, stretching and bending in every direction. You'd think that in-between forging lightsabers and lifting rocks, the Jedi would develop some sort of Force-assisted hair styling. Alas, only the Sith deal in absolutely amazing hair. Not to mention the fact that Yoda dresses in rags during his whole time on Dagobah.

Now we reach the Borg in the room, the Force. Yoda is a master of the Force, which grants him the power to do anything a particular plot requires. However, the Vulcans, including Spock, have all sorts of abilities which conveniently require almost no special effects to depict. They have sharp hearing, fast reflexes, high strength, multi-century lifespans, inner eyelids to protect their eyes from dust, and can survive for long periods without food, water or sleep. All without having to join an ancient cult that radicalizes young boys to become child soldiers. Maybe in a close-range fight, Yoda could use the Force to jump around prequel-style and win. But when it comes to survival in a harsh environment, or a game of three-dimensional chess, betting on Spock is the logical choice. Indeed, Spock's height alone would give him an advantage in basketball.

In conclusion better than Yoda, Spock is. Speak without annoying everyone other than McCoy, he can. Work with others, he can. Fix problems with a spaceship, he can as well. Dress well, Spock does. Pull children into galactic war, Spock does not. Appear on a Canadian five dollar bill if you scribble on it, Spock can. Clean his ears, Spock does and Yoda probably does not. Mature, Spock is. Lift rocks with his mind, Spock cannot. Meld minds with you to discover your deepest secrets after delicately, intimately placing his fingers on your face, Spock can. Wield lightsaber, Spock cannot, but chase down Benedict Cumberbatch in a crowded city while wielding a blaster, he can. Three-dimensional chess against Yoda, Spock will win. Basketball against Yoda, Spock will win. Mention events of prequels, I will not.

Simultaneously sillier and more intimidating in prequels, Yoda probably is.

#### Editor's Note:

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

# The Unmade Podcast

## Wouldn't It Be Great If...?



**RATAN VARGHESE**  
3A COMPUTER

RA(TAN) LINES

The basic premise of “The Unmade Podcast” is that Brady Haran and his friend Tim discuss ideas for podcasts that they probably will not make. For the benefit of Hello Internet fans: yes, this is the same Brady Haran and yes, Tim is the actual name of the co-host. The discussions often lead to long tangents about the lives of Brady and Tim, which sometimes help the hosts enhance their podcast idea, and sometimes don’t. The tangents are without a doubt one of the main attractions of the show. This is a Two Dudes Talking podcast, leaning almost entirely on the charisma of the two dudes.

The podcast ideas themselves range from the simple (keeping track of coin tosses) to the complex (famous moments that someone coincidentally missed). There are some very mundane topics (a collection of simple, wholesome moments) and very grand ones (listening and reviewing national anthems). Some of the ideas seem highly commercial, others are practically art installations. The key point is this: the

one rule for the podcast is that Brady and Tim will explain ideas for podcasts. Thing is, Brady Haran is a man who knows that rules are meant to be broken.

There are many special episodes of “The Unmade Podcast”. Some are actual pilot episodes of the ideas discussed in normal episodes: the “Wholesome”, “Trash or Treasure” and “Tommyball” podcast ideas have all received this treatment. Brady also uploaded an audio diary of his trip to Antarctica to the podcast feed. Some episodes involve both Brady and Tim travelling to some strange location, for example, the episode recorded on the island of Steep Holm.

Unlike certain other discussion-focused podcasts, “The Unmade Podcast” has quite a few guest episodes. Brady Haran is a fairly well-connected person, perhaps thanks to his many travels, work as a journalist, and all the interviews with academics in his various YouTube channels. The guests tend to blend in pretty well, suggesting podcast ideas alongside the hosts. A recent episode featured Hank Green, and it was fine. However, in my opinion, the most fascinating episode so far has been “15: The Narrowboat Episode”, where the guest is Brady’s friend Jono, who also lets Brady and Tim travel in his narrowboat through the English countryside. Since

I had no knowledge of narrowboats and narrowboating culture, it was actually educational. It also counts as an episode in a strange location, although for all I know there could be a whole genre of podcasts recorded on narrowboats. If you particularly like Brady’s interactions with guests, you might also enjoy his “Numberphile” podcast, which is apparently more casual than the YouTube channel (also run by Brady) of the same name.

The key thing about the guest and travel episodes is that they don’t feel gimmicky (unlike the pilot episodes, which are inherently gimmicky). The conversations aren’t scripted, they’re just heavily edited, so every particular portion is something resembling natural. The core premise of the podcast, discussions about making podcasts, is broad enough that anyone from any walk of life could potentially talk at length about it. After all, since a discussion can be a podcast, anything that can be discussed can be podcasted. In fact, “The Unmade Podcast” might discuss your podcast idea... if you subscribe to their Patreon and send them your concept. So far, most of the fan ideas were provided by Canadians, so you, dear reader, are in a good position to submit one. Of course, you could aim higher and actually make your podcast idea a reality, but not all ideas have commercial or celebrity potential.

Some do, though, which leads to the weirdest part of all this: ideas discussed on “The Unmade Podcast” which have

actually been made. Episode 1, released on the 22nd of August 2017, featured a concept titled “Podcastology” wherein each episode focuses on a different field of study. On the 4th of September 2017, Episode 0 of the “Ologies” podcast by Alie Ward was released, including some short audio clips from future episodes. It is a beautiful coincidence: the episodes actually seem too close together for the latter to be inspired by the former. Another idea from episode one of “Unmade” was to watch the film “Groundhog Day” every day and record a discussion about it every day. At the time of release, Tim Batt and Guy Montgomery had already watched “Sex and the City 2” once a week for a year, and probably finished doing the same for the Zac Efron vehicle “We Are Your Friends”. This probably just indicates that the Australian hosts of “The Unmade Podcasts” aren’t paying attention to Kiwi comedy. As mentioned earlier, the podcast medium is vast. With so many people attempting so many different podcasts, it’s a wonder that there are any unmade ideas at all.

If you want to start your podcast before Brady and Tim think of your idea and discuss it, the time to act is soon. There is a new episode of “The Unmade Podcast” once or twice a month, and “normal” episodes are usually around forty minutes or even an hour long. There are currently only 22 episodes, but given the potential of the premise and the sheer productive might of Brady Haran, there will likely be many more to come.

## Tragedy in Taiwan Bikini Climber Dies on a Solo Hike



**MRIDU WALIA**  
MECHANICAL

A 36-year-old Taiwanese mountain climber, Gigi Wu, plummeted to her death during a solo hiking trip in the mountains of Taiwan. She was popularly known as the “Bikini Climber”; although she would climb mountains in proper hiking gear, she would change into a bikini to pose for pictures at the top. In a recent interview with the local channel FTV, Gigi claimed to have hiked over 100 mountains in the last four years. When she was asked the reason be-

hind it, she said, “It’s so beautiful. What’s not to like?”

airlift Gigi from the site of the accident. A search and rescue team of six emergency responders was dispatched by the Nantou Fire Department to search for Gigi. By the time the rescuers found her body by the ravine, it had been over 28 hours. The temperatures had dropped below the freezing point overnight, and sadly, by the time the rescue team arrived at the coordinates provided by Gigi, she had passed away. According to reports from Apple Daily, she had no signs of life when the search and rescue team found her. The actual cause of her death is undetermined, i.e. whether it was due to the injuries she sustained; however, authorities are speculating that she died of hypothermia.

On Friday, December 28, 2018, Gigi



dizzy via flickr

**Yushan Mountain, where Gigi’s body was found.**

hind it, she said, “It’s so beautiful. What’s not to like?”

Reportedly, Gigi Wu was in the middle of a 25-day solo hiking trip through the mountains in Taiwan. On Monday, January 21, 2019, Gigi was hiking Yushan Mountain in Central Taiwan. She was involved in an accident while she was hiking the mountain, and she fell 20-30 metres (approximately 100 ft) into a ravine. She sustained major injuries which made it impossible for her to move or get help. As she was stranded in the ravine, she successfully used a satellite phone to inform her friends about the accident, who contacted emergency services.

Bad weather conditions made it impossible for rescuers to deploy a helicopter to

shared a picture of her legs after a hiking accident. She had scrapes and bruises all over her legs after slipping off a cliff. Gigi was popular on social media and had over 14,000 followers according to reports from Taiwan’s Central News Agency (CNA). When the news spread about her falling into the ravine, her fans and followers poured their blessings and wishes in the comments section of her hiking pictures wishing for her “safe return” from this disaster. Once the news of her death broke out, her Facebook page was converted into a memorial page to allow her followers to visit her profile to remember and celebrate her memory. They offered their condolences and expressed their grief on her final post.



As the hub of Ontario’s electricity system, the Independent Electricity System Operator (IESO) is responsible for planning and securing energy for the future and managing the wholesale electricity market. Working at the IESO means being part of a challenging, fast-paced environment where team-focused, analytical and proactive professionals can thrive.

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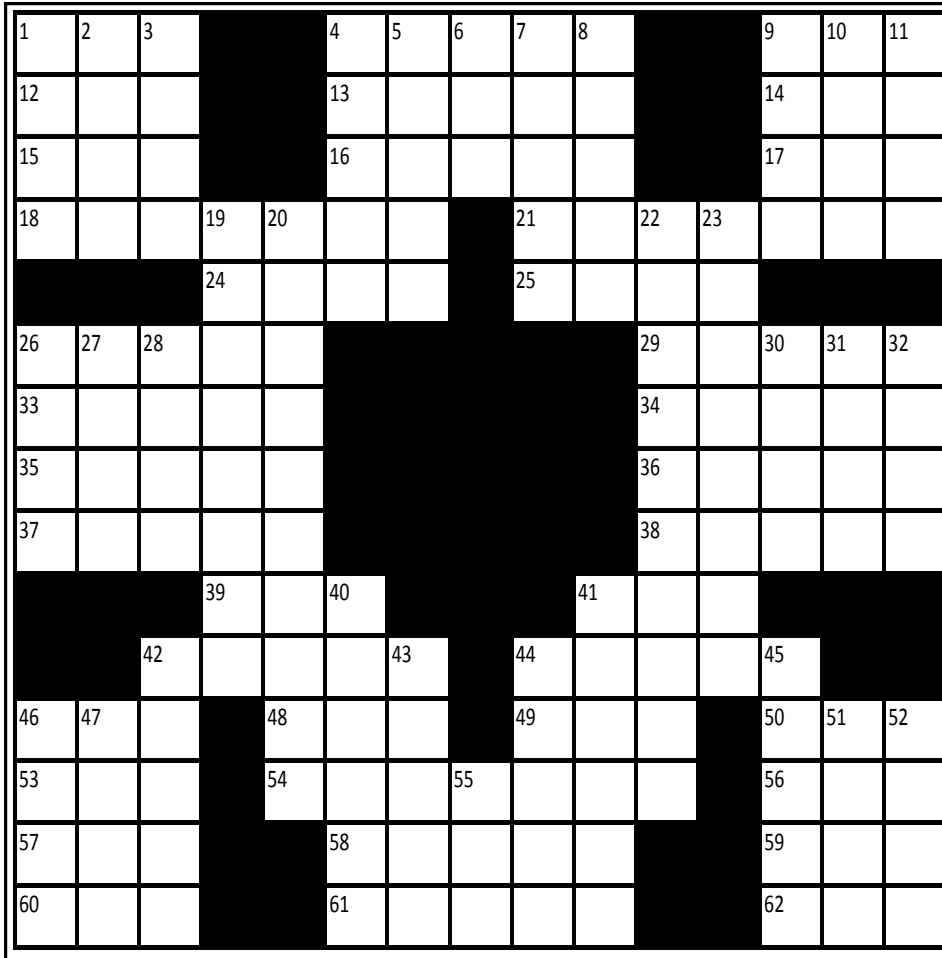


Connecting Today. Powering Tomorrow.

# The Iron Crossword

The Love of Wisdom

SAATVIK WALIA  
3B COMPUTER



**ACROSS**

- 1: Acronym for a videocassette recorder (abbr.)
- 4: A cold soup of sorrel
- 9: Empirical formula for magnesia
- 12: An international quality assurance agency
- 13: Genus of trees in the family Malvaceae
- 14: \_\_\_ of the blue
- 15: A genus of pirate spiders
- 16: A set of moral principles
- 17: A small terrier dog breed (abbr.)
- 18: Bolding resistant or challenging
- 21: Obidient
- 24: An introspective self-report questionnaire (abbr.)
- 25: A member of the nobility
- 26: Muslims who have been to Mecca
- 29: Help in the achievement of something

**DOWN**

- 33: Vigor in doing something
- 34: Kongo word for drum
- 35: A court case
- 36: Gestures used to convey information
- 37: Expertise in the fine arts
- 38: A spanish island in the W Mediterranean
- 39: When is 'X' expected to arrive? (abbr.)
- 41: Writing direction of Arabic script (abbr.)
- 42: Out of the way
- 44: To show disapproval
- 46: Informal term for medication
- 48: Systems Research and Applications Corporation (abbr.)
- 49: Unique Leader Records (abbr.)
- 50: A span of time
- 53: Most powerful country (abbr.)
- 54: Considered from a moral position

- 56: Intermediate Educational Unit (abbr.)
- 57: Not keep pace with others
- 58: "How Far \_\_\_ \_\_\_", song from movie Moana
- 59: Search and Rescue (abbr.)
- 60: Finnish term for hat
- 61: A unit of currency in Kyrgyzstan
- 62: Three-letter-acronym (abbr.)

**DOWN**

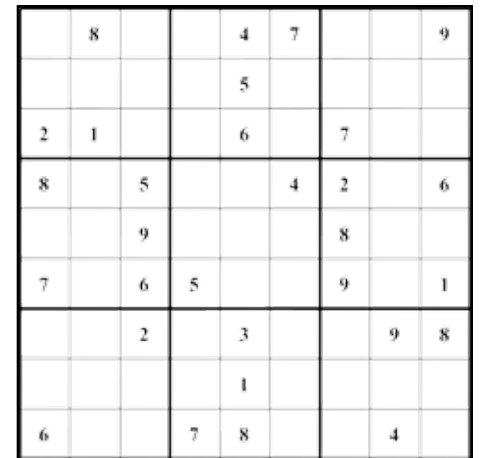
- 1: Compete to achieve something
- 2: To look after
- 3: Shelter that provides protection
- 4: A distinctive pleasant smell
- 5: Francesco \_\_\_\_\_, an Italian Jesuit priest, zoologist and mathematician
- 6: Australia's second largest insurance company
- 7: To act in accordance with
- 8: Plural form of vacuum
- 9: A magic charm
- 10: Sanskrit term for teacher, master or expert
- 11: Over the top services (abbr.)
- 19: Follow as a model
- 20: Belief in absolute principles
- 22: Not permanent
- 23: Qualified for a task
- 26: American satellite television channel
- 27: A combining form meaning "gold":
- 28: Journal of Scientific and Industrial Research (abbr.)
- 30: A judo or karate uniform
- 31: Effective Microorganisms New Zealand (abbr.)
- 32: Sanskrit language term meaning enemy or servant
- 40: Skillful in using the hands
- 41: \_\_\_ - \_\_\_ A liquid cosmetic
- 42: A wise saying
- 43: Near the beginning of time
- 44: Tending to bulge
- 45: A person who believes in deism
- 46: To think about carefully
- 47: Older son of Isaac
- 51: Existent
- 52: Field of energy given off from an individual
- 55: Male Arabic name which means champion

# Sudoku

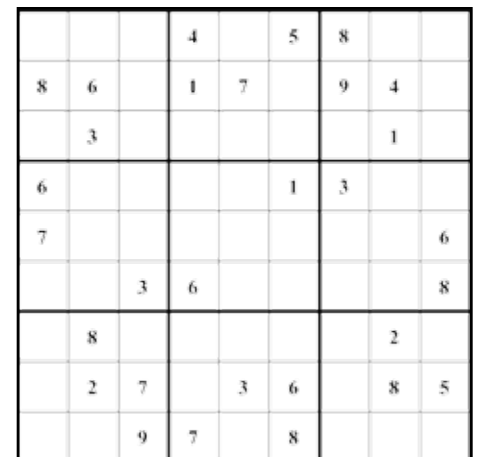
#2019-02

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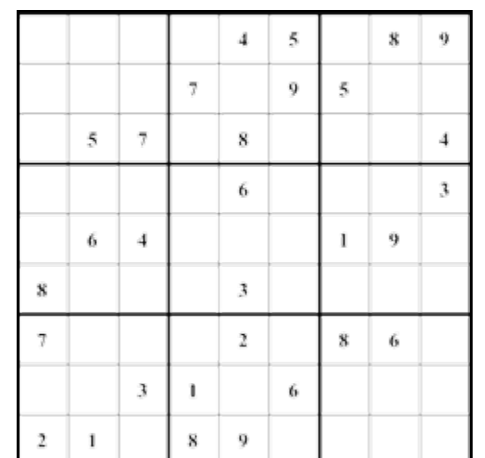
Easy



Medium



Hard



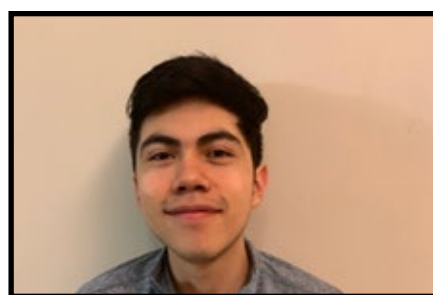
Solutions for previous crosswords can be found on *The Iron Warrior's* website at [iwarrior.uwaterloo.ca/distractions](http://iwarrior.uwaterloo.ca/distractions).

THE IRON INQUISITION  
David Mendoza, 1B Chemical

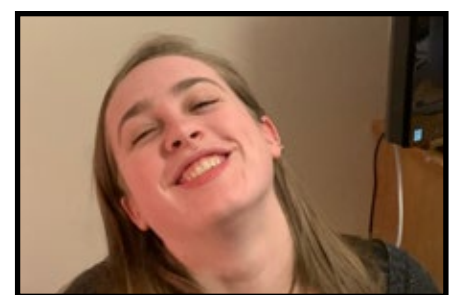
## "What are you doing for reading week?"



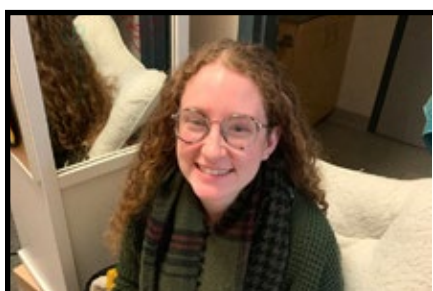
"I'll be here."  
Michael Ingstrup, 1B AFM



"Try not to procrastinate."  
Esteban Velasco, 1B Mechatronics



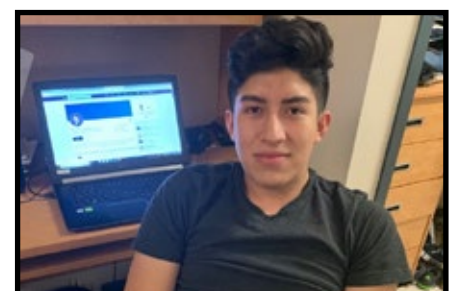
"I'll be home."  
Melysa Torrey, 4B SDS



"I'm on co-op."  
Amie Durston, 4B Psychology



"Study, sleep, repeat!"  
Felicia Lu, 4A Computing and Financial Management



"Work hard, play hard!"  
Javier Fierro, 1B Architecture