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# Swedish Defense Company Saab Joins the Competition to Replace Aging Fighter Fleet



Source- Flight Global

#### Photo from debut flight test of the Gripen E.

**STONE HE** 2B MECHANICAL

At the end of last month, Swedish aerospace defense company Saab has joined the competition to find a replacement for the aging CF-18 fleet of the Royal Canadian Air Force.

Saab's new fighter jet the Gripen E will compete in a \$19 billion-dollar competition for 88 new jets in the Canadian Air Force. In addition, Saab hopes to have the jet assembled in Canada by Canadian firms, as they did with their successful Brazilian contract. Saab is one of 2 European companies, competing to win the contract, with the other being Airbus with their Eurofighter Typhoon.

Near the end of 2017, the fighter jet competition was launched in hopes of

finding a replacement for the aging fleet. Currently, the fighter jets currently in the competition are the F-35, Eurofighter Typhoon, Super Hornet, and the newest competitor, the Gripen E.

The new Gripen E was based on an older generation JAS 39, which was designed to counter invasions from other countries during the Cold War. However, the JAS 39 was introduced in 1996, 5 years after the end of the Cold War.

Compared to the other jets in the competition, the Gripen E is robust and rugged. It can take-off and land in snow-covered runways at 800 meters, and takes 10 minutes, factoring in the conscripts, to rearm and refuel before going back to fighting. The robust design of the Gripen E could potentially give it an edge compared to the other jets in the competition. According to Per Alriksson of Saab Aeronautics, the Gripen "has Arctic DNA built into it...

(and) it is pretty good in operating in dispersed locations (like Canada) [1]."

The Canadian government has been desperate to find a replacement for their aging CF-18 fighter fleet. The CF-18 Hornet was introduced in the Canadian military in 1983 and considerations for replacing the jet began since 2010. Canada has been a contributor to the production of the F-35 Lightning II jets and had considered purchasing these jets earlier this decade. However, due to the increasing costs of the F-35, the replacement jets have been reconsidered

As the CF-18 Hornet fleet ages, a replacement must be considered soon. As a temporary solution, Canada ordered 18 Super Hornets from Australia in 2017 as a temporary replacement due to their similarities to the F-18 fleet. The first Super Hornets arrived in February 2019 in CFB Cold Lake and will be delivered until 2021. However, the currently existing CF-18 Hornets will

have to serve another decade before the 88 new generation fighter jets could be in full operation.

American and European firms vie with each other to secure the contract for the 88 new replacement jets. Saab recently joined and has offered Canada on why its jets stands above the rest of the competition. Saab, as well as the other firms, hopes to win the competition.

[1] https://nationalpost.com/news/in-pursuit-of-19b-contract-swedens-saab-offers-to-build-fleet-of-fighter-jets-in-canada?fbclid=IwAR1XmYTC lGDjFgu6\_UtbFyPqkvj7rNORfqzbN\_aGbM3iXaNRsxbRDpDcvYU#comments-area

# **Letter From the Editor**

## Do You Hear the People Sing?

#### JANNY WANG **EDITOR-IN-CHIEF**

If God should deign to give me such fame as makes my last words worth knowing, then let them be: "Victor Hugo's Les Miserables does not take place during the French Revolution of 1789."

The novel begins in 1815, after the fall of Napoleon, and runs up to the July Rebellion- not Revolution- of 1832. The street revolt which prompted all those soul stirring anthems was actually a rather minor episode in the revolutionary turntable of French history.

I have mentioned previously that the republican shenanigans of 1830 somehow brought about the July Monarchy of Louis Phillipe the Citizen King.

In 1830, longstanding animosity towards the Bourbon monarchy finally boiled over when King Charles issued the July Ordinances, which abolished freedom of the press and further limited the French electorate. In Paris, citizens began to throw paving tiles and flower pots at the soldiers and barricades sprang up in the streets. When ignoring the revolution proved futile, King Charles bravely made a run for it and jetted off to Great Britain to sulk in exile for the remainder of his life. Thus ran the Three Glorious Days.

Louis Philippe of the House of Orleans, who had hitherto done absolutely nothing at all, was plucked from his comfortable country house and ushered onto the balcony of the Hotel de Ville, where Lafayette made him king by kissing him.

The ones who had actually fought during the Three Glorious Days- though showered with epaulets and laurels by the new regime- never really reconciled themselves to the idea that all that revolutionary bloodletting simply netted them a more permissive tyrant.

In this group fell the merry band of rebels from Les Mis. The book glosses over the 1830 Revolution in a few passages; the musical blithely skips over it altogether, eulogizing the dead rebels as "schoolboys... who never held a gun". In actuality, almost all those who took up arms to overthrow the government in 1832 had taken up arms to accidentally inaugurate it two years prior.

These would be revolutionaries gathered in secret societies, most notably the "Society of the Rights of Man". In true revolutionary fashion, the members gave themselves romantic names which conjured up images of the glorious recent past- "Robespierre" and "Babeuf" and "War with the Castles". (The last was a reference to the quote "War on the castles, peace to the villages!" which

has been variously ascribed to Danton, Lenin, and Buchner.)

The trigger for the rebellion was the death of General Lamarque.

Lamarque was a Napoleonic officer and an inveterate critic of the monarchy. His father had been a delegate to the National Assembly of 1789, which had sworn to give France a Constitution. The younger Lamarque joined the army in 1791, when the First French Republic declared war on all and sundry, and was awarded the title of brigadier general by Napoleon in 1800 after a particularly valourous episode.

After the fall of Napoleon, Lamarque briefly went into exile, returning to his homeland in 1818 to throw hands with first the Bourbon Restoration and then the government of the Citizen King Louis Philippe. This, naturally, made him a darling of the people, and when he died, huge crowds gathered in mourning.

This was altogether too good a chance for the revolutionaries to pass up.

On June 5th, revolutionaries quite literally crashed Lamarque's funeral, waving a black bordered red flag, whereupon a shoot out ensued between the crowd and the soldiers.

In spite of this auspicious beginning, the revolt failed to spread. The government of Louis Phillipe had not quite lost the sheen of novelty and the revolutionaries did not garner the mass support that had made the July Revolution a possibility. By the night of June 6th, the rebellion had been crushed by the National Guard, with a total count of around 800 dead on both sides.

It is from this general slaughter than the protagonist of Les Mis, Jean Valjean, manages to save his daughter's love interest. All of the other revolutionaries die tragically, but not before Hugo manages to squeeze in a few dozen speeches about God, justice and socialism.

The revolutionaries, now serenading in heaven, did manage to have the last laugh in 1848, when the people of Paris finally rose up in strength and drove the government of Louis Philippe from the

The pretext for the failed June Rebellion had seemed suitably romantic; the pretext for the successful Februrary Revolution of 1848 seemed almost satirtical in its absurdity.

By now thoroughly soured on the Citizen King, the enlightened men of France decided to vent their frustration by holding self congratulatory banquets, where they drank wine, decried the tyranny of the present government, and assured each other that they were all quite witty and progressive. As far as threats to the existing regime went, this did not quite rank as revolutionary.

The sans culottes of Paris decided

to ape their frock coated superiors and arranged their own banquet, with blackjack and hookers and more political radicalism. At this point the government had an apoplectic fit and outlawed political banquets altogether. It was this clumsy, heavy handed reaction which sparked the revolution of 1848.

Upon these ineffable beginnings, the Second Republic was founded.

Victor Hugo himself was elected to the Second Republic after the revolution of 1848 as a conservative, whereupon he promptly about faced and sided with the leftists. When Louis Napoleon finagled his way into an Empire, Hugo was exiled for his outspoken criticism of the government, and after kicking about Europe for a bit, he finally settled in- of all places- Guernsey, where he wrote Les

The book was widely denounced at its publication. Lamartine- a famous French novelist and rather infamous politicianwrote that the characters in the book were not "miserable at all... merely lazy and sinful". Nevertheless, the book wasand remains- wildly popular. There is a probably apocryphal story that Hugo's editor, when asked via telgeram how sales were going, replied with a pithy "!".

Les Mis is today one of the most adapted works of all time- there is the stage musical, a handful of miniseries, two or three movies- and an unlicensed sequel of dubious quality called Cosette. The Soviets, in particular, were extremely fond of making spin offs only tangentially related to the main novel.

To conclude, I would like to shill, once more, for Mike Duncan's Revolutions podcast, which contains a series on the 1830 revolution, which brought Louis Philippe to power, and another on the 1848 revolution, which kicked him out. Les Mis scarcely needs to be advertised, but I'll put in a good word for it anyways.

As always, reach out to me at iwarrior@ uwaterloo.ca.

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# WatLock – UWaterloo ventures towards Mars Colonization!

JASON TIOU-FAT WATLOCK CO-LEAD

The idea of building a self-sustaining colonization on Mars and becoming an interplanetary species has seen decades of discussions. It is an aspiring mission that companies such as Mars One, NASA and SpaceX are currently working on... and so are we.

WatLock is a Student Design Team with the objective to design and build a sustainable airlock for human habitation on Mars. WatLock was founded in 2018, making it one the youngest student design team at the University. Our close-packed, fast-growing team breathes in a start-up environment. It is one of the few design teams at the University of Waterloo that builds its foundation around space engineering. To be able to accomplish our ambitious goals, we have

to think as space engineers. We are a team that shares a burning passion; space exploration!

However, settling on the red planet inherently comes with numerous technical challenges; the planet has a lack of pressure, no breathable atmosphere, extremely cold temperatures, and hazardous perchlorates in the soil. So how does WatLock plan to overcome these overwhelming complications? Quite simply, it is by bringing young innovators and future leaders from the University of Waterloo together and pushing their boundaries.

"WatLock's primary goal is to a build safe and inviting atmosphere that encourages members to share their ideas and learn new skills. Every member should take pride as we design and build technology for the future of space exploration."

#### The competition | Phase 1

There is only one mission: Design and build an airlock that will function in a human colony on Mars. Our airlock will be crucial to providing a safe entryway into any sort of Martian habitat that can sustain an atmosphere for people to breathe.

On the weekend of May 18th, 2019, various universities came together to present their airlock design at UBC's Mars Colony Project Airlock Challenge. WatLock proudly won the best presentation award after months of hard work

#### The competition | Phase 2

Now that the design is done, its time build a functional prototype! This spring 2019, we'll be building a depressurization system and hatches for the airlock, designing a user interface for astronauts to use, and building a central computer. These technical challenges require the integration of different expertise. Thus, each project is being tackled by a multidisciplinary team of students consisting of engineering, maths, arts, and sciences students. The

mechanical team is tasked for the design of all components and subsystems of the airlock. Members on the team do a lot of drawings by hand and afterwards proceed to completing designs with simulations, modelling, and calculations using SolidWorks. The electrical team works with control systems such as life support and pressure control consisting of the computerized system of our airlock and the autonomy of nearly all systems. Members of the team spend work mostly with microcontrollers, circuit design software and communication protocols. The business and communications team handles the team's website, finances, marketing and sponsorships.

When completed, further projects will be initiated as we approach the day of the competition which is on May 2020. These projects include but are not limited to building an air filter, water purification system, hydrolysis fuel cell, power systems and the overall structure of the airlock.





# **UWaft-Team to Watch**

**ASAD BHATTI** UWAFT PROJECT MANAGER

Pushing the frontier of the transition to sustainable fuels has been the cornerstone of UWAFT. The student team, situated in Engineering 5, consists of over 50 active undergraduate students, engaging in research and development on the cutting edge of automotive legwork. Establishing its roots in 1996, the rich history of the University of Waterloo Alternative Fuels Team (UWAFT) is noteworthy, with over a 1000 undergraduate students having been involved with the team in some shape or

form, from up to 14 different technical and non-technical disciplines. The team has participated in 7 Advanced Vehicle Technology Competition series, funded by U.S. Department of Energy, General Motors and the Argonne National Laboratory. The student team has delved into development of technologies around ethanol in its early years to hydrogen fuel cells, and now to fully capable hybrid vehicles.

"Producing the next generation of engineers ... who will be prepared to address the nation's future energy and transportation challenges." is not only the mission statement for the current 4 year long competition EcoCar Mobility Challenge (EMC) that UWAFT is taking part in; it defines UWAFT's current focus in tak-

ing a GM donated 2019 Chevy Blazer RS and converting it to a fully capable Hybrid Electric Vehicle capable of SAE Level 2 Autonomous Driving.

UWAFT takes pride in its leadership and has produced success stories from its former alumni in the form of spin-off companies such as GeoTab (formerly FleetCarma formerly CrossChasm) and IntelliCultur. Its presence is being recognized as a power house in producing student leaders who have worked in companies like Tesla, General Motors, Toyota, Uber, GeoTab, Lyftand the list goes on!

On that triumphant note, UWAFT was in Atlanta Georgia participating in Year 1 EMC competition earlier this month, competing against 11 other universities10 U.S. based universities and McMaster University in Hamilton, Ontario. All of UWAFT's hard work paid off, winning 7 awards including "Team to Watch", hauling in \$8000 in prize money and placing 5th overall!

The team is one of a kind team in terms of history and industry relations in North America, where undergraduates operate at the vanguard of automotive prowess.

Check us out at the SDC in E5 - we're always looking to expand our team. All technical and non-technical disciplines are welcomed to join!





# **CosmoFest: A Brief Overview and Review**

#### **STONE HE** 2B MECHANICAL

Over the first weekend of June, I decided to go to the CosmoFEST in Richmond Hill, north of Toronto. The Cosmo MusicFEST and EXPO is a one-day event that hosts a live show, an exposition, and a clearance sale in the music store. 6 musicians hosted guitar and drumming sessions throughout the day. In addition, Geddy Lee was present for book signing. Since there was much to do, I will try separate the overview and my experiences during the MusicFEST into different key points.

#### **EXPO:**

The EXPO was where companies display their latest music products. Most of the companies were related to making guitars, amplifiers, keyboards, sound systems and effects, as most of the MusicFEST goers are mainly into those stuff. Unless you are into those stuff, there isn't much to see on classical musical instruments. As any student on a co-op program, I did ask

the representatives about internships in theses companies. It seems that with a few exceptions, like Godin and Yorkville, most of the companies require me to work in USA or Overseas. Also, I did take advantage of the EXPO to buy some palm tree guitar picks for \$30 (unfortunately, one was defective).

In addition, there were prizes for everyone who ordered a wristband early on, but you must tap your wrist band to certain counters to enter in the draw

#### **Clearance Sale:**

Everything is STILL expensive, even though most stuff is on discount. I guess music stuff is very expensive.

Main Stage Concert:

Outside of the EXPO, there is an outdoor concert. I did not see much of it, but I was there to hear and see Chiliwack and Finger Eleven, which were both widely acclaimed Canadian rock bands. The other bands that were there include Sloan, Terra Lightfoot, and the Cosmo Soul Express Band. The latter were comprised of the Cosmo music staff. The concert was like any other typical rock concerts, and it was very interesting to get to know some new (old) bands that I haven't heard of.

#### Geddy Lee's Booksigning:

During the MusicFEST, Geddy Lee was present to do a meet and greet and a book signing of his latest book, "Big Beautiful Book of Bass." Geddy Lee was the bass player for the progressive rock band Rush. Rush was a band formed in Toronto in 1968, but the current line-up of Lifeson, Lee, and Peart was established in 1974. However, earlier in 2018, the band officially disbanded after a successful career with winning numerous awards and being inducted in the Rock and Roll Hall of Fame. I did not buy the ticket to do the book signing and meet and greet, which I regretted after seeing the books. However, at least I got to see Geddy Lee in real life. He was around my height.

In addition, I did find out that Dave Grohl was accompanying Geddy Lee during the MusicFEST, which was interesting to know.

## Nicko McBrain's Drumming Session:

However, I did decide to go check out Nicko McBrain's drumming session, since it was cheaper than the book signing. This was one of the 3 drumming sessions that were held during that day. The other drummers were Simon Philips and Omar Hakim, which I did not attend. Nicko McBrain is the current drummer of an English heavy metal band Iron Maiden, which was founded in 1975 in England. During the drumming session, at least half the time was taken up talking about his past and his band experiences, more than a quarter of the time about his drumkit and the specifications, and an eighth of his time playing the actual drums. The rest of time was spent apologizing to the Lord for every time he said the F-word, but not the S-word however. Overall, it was a very entertaining drum session and I really enjoyed his presence there.

#### Overall:

Even though I arrived later in the afternoon and did not get to experience CosmoFEST the entire day. It was great to see some live bands, new music products, meeting famous (rock and metal) musicians and getting discounts during the clearance sale. I would recommend anyone who has the time and is a fan of rock music to go next year.

# What's Good at DP Library?

#### Nicholas and Alexandra by Robert K. Massie: A Review

JANNY WANG 2B NANOTECHNOLOGY

Nicholas and Alexandra is a cozy, almost domestic account of the life of the last Tsar and his wife Alexandra. The Autocrat of all Russia features as a mild-mannered bourgeois sipping tea in his wife's mauve boudoir. Alexandra's personality takes on a sharper focus; she is devout, dutiful, and- in spite of the author's protestations to the contrary-unhinged in her hysteria and stubborn blindness.

Special attention is paid to the effects of their son Alexei's hemophilia, both on the couple personally and on the affairs of Greater Russia. The author, himself the father of a hemophiliac, details with grueling exactness the emotional strain placed on the parents, until the reader is almost inclined to sympathize with the perpetually haranguing Alexandra- at least until she launches herself into her next bull-headed political misadventure.

The chief author of these political misadventures is the Mad Monk Rasputin, here portrayed as a bluff, carousing holy man and occasional date rapist, with the inexplicable ability to control Alexei's bleeding. The author's descriptions here are wonderfully evocative, in stark contrast to his long-winded masturbatory accounts of the Romanovs' domestic bliss

The domestic bliss takes up about a third of the book, leaving precious little time for other matters; in spite of all the oblique references made to student radicals, terrorists, and assassinations in the background the author really does not do a terribly good job of building the political scene. Were this a novel, the revolution would seem an inexplicable last-minute plot twist, badly foreshadowed and incredibly unwarranted.

The different factions of revolutionaries, their competing goals and motives, are all allowed to fall by the wayside, while we are treated to yet more descriptions of the beauty of the Crimean countryside.

To address the reasons for the revolution would probably have entailed a closer examination of the faults of "Nicky" and "Sunny". The author treats them with kid gloves, neatly sidestepping both the dubious morality of a feudal autocracy and their personal failings as rulers. He will concede that Alexandra probably should not have put the entirety of the state apparatus in

Rasputin's hands- but the Mad Monk's unmannerly whoremongering could not itself have been the sole cause of the fall of a three-hundred-year-old dynasty

This is the real flaw at the heart of the book- the author is much too fond of his subjects and disinclined to give a truly impartial analysis of their reign and fall. However much "Nicky" and "Sunny" loved each other, however sweet their letters and everlasting their bond, it does not change the fact that they were singularly incapable of making a single competent decision in all twenty-some years of their reign.

In spite of the author's obvious biases, the book's compact and easy style make it an enjoyable read. It will probably not do much to better the mind, but it a pleasant breezy book to read in snippets between midterms.





# **Debates**

For the last several years, the University of Toronto has won the debating contest at the Ontario Engineering Competition. This shall not pass. If you like to argue with your classmates for fun, even if you've never debated before, then you need to come and try to argue for the pride of Waterloo Engineering (and for cash prizes). Only by entering the SFF debate competition can you prove that Waterloo engineers will never be content to be second place. You must sign up to compete.

The SFF debate competition will be held on Friday, July 19, starting at 5:30pm in DWE 1502. Cash prizes will be awarded to First, Second and Third place teams. The top team is eligible to represent UW at the annual Ontario Engineering Competition. The debates will be in teams of two, so please register your teams by emailing sff@uwaterloo.ca. Questions regarding policy and format can be addressed to atrivett@uwaterloo.ca. Let's make it so, number 1.

# Technical Speaking Competition

Do you have a passion for engineering design, communciation and public speaking? The SFF Technical Speaking Competition is a great way for you to show off your technical speaking skills and personal projects, and to win cash prizes for it.

The Technical Speaking Competition will be held in mid-July. Students wishing to participate must submit a 100 to 200 word abstract and a preliminary deck of slides in pdf, pptx or ppt format. Six students will be selected for the competition, based on submitted material.

Questions about competition rules can be addressed to the coordinator, Jason Grove, at jason.grove@uwaterloo.ca. Prove your mettle in the SFF Technical Speaking Competition!

# **Pride Month: Where are we Now?**

Did She Just Say the F-Word?



Its June! And you know what that means – it's Pride month! Most people identify this month as the most colourful month of the year full of rainbows and parades. But that is not all this month is. It is not a surprise that the origin of June as Pride has a very discriminatory history.

June of 2019 marks the 50th anniversary of the beginning of the Stonewall riots. In 1969 homosexuality was illegal in New York City. People of the LGBTQ+ community would find refuge in gay bars such as The Stonewall Inn. However, these bars were prone to police harassment. On Saturday, June 28, 1969, nine policemen arrested the employees of the Stonewall Inn for selling alcohol without a license (a common excuse), roughed up the patrons, and arrested anyone not wearing at least three items

of gender identifying clothing. But this time, the people outside the bar stood up for themselves and started jeering at the police. They threw debris and bottles at them, which led to the policemen calling for reinforcements. The riots outside the Stonewall Inn lasted the next five days.

While we have come a long way from 1969, there is still a longer way to go. The initialism LGBTTQQIAAP, is one of many used to describe the people of the LGBTQ+ community. It stands for lesbian, gay, bisexual,

transgender, queer, questioning, intersex, asexual, ally, pansexual. This initialism, and more like this one, are often criticized for being too confusing and almost always leaving some people out. There are still way too many countries in the world where homosexuality is criminalized. People of this community are more prone to harassment. It is not uncommon for straight people to want to have a straight pride month in mockery of the actual Pride month. In fact, Boston seems to be getting its first Straight Pride Parade this summer (eye-roll).

But because June is the month of celebration of the history of the LGBTQ+ community, here are a few strides that the world has made in the right direction. In May 2019, Taiwan became the first country in Asia to legalize same-sex marriage. Bhutan decriminalized homosexuality this June as well, and so did countries like India in the past few months.

But, like I said, we still have a long way to go and it all begins on an individual level. It is great to educate yourself about the happenings of the world. If you would like to show even more support and participate this Pride, the Toronto Pride Parade is happening on Sunday, June 23, 2019.



Source: Toronto Pride Website

**Celebrations at the Toronto Pride Parade** 

# **Canadian Indifference and State Sanctioned Violence**

HASSAN ALI 2B NANOTECHNOLOGY

When Canadians examine the world in which they live, it's easy to see state sanctioned violence, human rights abuses, and injustice in other countries. From the wars and instability ravaging the Middle East, the poverty and dictatorships across Africa, and the authoritarian leaders elsewhere, it's easy to believe that Canada is a bastion of harmony and prosperity. While it is true that Canada, from a global perspective,

is relatively liberal, prosperous, and democratic, one should always be more critical of situations close to home, which one exerts greater influence over, rather than the crimes of official enemies. As George Orwell wrote, "to see what is directly in front of one's nose requires a constant effort," and it seems most Canadians have refused to make that effort regarding the suffering and persecution of Indigenous women, girls, and queer people. The other possibility is that Canadians are simply indifferent to the treatment of Indigenous people. Perhaps the truth is somewhere in the middle. But the reality is simple. Canada is a settler-colonial society.

It is founded on the genocide and occupation of the Indigenous people and their land. The recent report released by the National Inquiry into Missing and Murdered Indigenous Women and Girls (MMIWG) clearly illustrates that the principle, "the only good Indian is a dead Indian" is thriving in twenty-first century Canada.

The anger over the use of the term genocide to refer to the brutalization of the Indigenous people of Canada demonstrates the continued dehumanisation of Indigenous people by the state, including by Senator Linda Frum and journalist Jon Kay. The use of the term genocide to refer to the Canadian

treatment of Indigenous people does not in any way diminish the horrors of the Holocaust or other historical genocides. In fact, arguing this point disguises the reality that the Holocaust was partly inspired by the treatment of Indigenous people in Canada. If the decimation of the Indigenous population due to centuries of colonial state policy does not constitute genocide, then what is genocide? Between the sixteenth and nineteenth centuries, the Indigenous population of Canada was decimated through disease and warfare. The population in recent years has begun to rise again at a fast rate. However this does not discount the charge of genocide, it merely reflects the fact that people in impoverished situations have higher birth rates. The European colonization of the Americas was the worst genocide in human history and it has been transformed many times but the colonial project of eliminating the "inconvenient Indian" from history has not disappeared.

Anyone familiar with the official definition of genocide is also aware that the term entails more than simply killing members of a group, which the state of Canada has certainly done to Indigenous people. It also discusses other acts such as attempts to prevents births in population, causing serious harm to mental health, or forcibly



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# The Fraud of Wokeness

HASSAN ALI 2B NANOTECHNOLOGY

A Bloomberg Businessweek headline earlier this year read, "How Dow Chemical Got Woke," and underneath stated, "the conservative mega-corporation responsible for making napalm during the Vietnam War now has a gay CEO." Similarly, MSNBC reported in January 2019 that "the military-industrial complex is now run by women." Many in the media have celebrated these changes as progress against misogyny and homophobia, which is rampant throughout the world. But is there any genuine progress here? Does war and exploitation become acceptable when women and LGBT people are allowed partake in it? This type of shallow "wokeness" which is entirely devoid of economic and structural analysis has been co-opted by elites to push forth the most reactionary and violent systems of oppression.

Since her ascension to CIA director in 2018, the CIA has used Gina Haspel's gender to demonstrate progress in US intelligence services. The same woman that was involved in a secret CIA detention center where inmates were tortured is now presiding over an intelligence service that is known for its remarkable contempt for democracy and human rights. How is this a progressive

achievement? The CIA has routinely overthrown democratically elected governments and imposed brutal dictatorships across the Global South including in Chile (1973), Iran (1953), and the Democratic Republic of the Congo (1961), to name some of the most brutal regimes with the most atrocious human rights records. Is this a victory for women everywhere or for feminism? The women raped, murdered, or exiled under Pinochet's tyranny would likely disagree.

The devastating impact of this appropriation of liberal discourse by corporate power and neoconservative hawks is astonishing. In fact, according to a poll by Politico, Democrats are far more likely to support US wars and military occupations abroad than their Republican counterparts. How can this be? What happened to the Republican "hawks" and Democratic "doves"? The truth is simple. Despite the masks different political actors might wear, the difference in policy, especially foreign policy, between the "nice liberal centrists" and the right-wing hawks was always marginal. The mainstream liberal press has hardly ever questioned imperial conquest of the Third World, except in retrospect, and mainstream Democrats have regularly cheered on wars, sanctions, and regime change operations. "Feminist icon" Madeleine Albright said she believed that sanctions that starved possibly hundreds of thousands of Iraqi children to death

were "worth it" and Hillary Clinton endorsed the Iraq war in 2003. Similarly, although former President Obama opposed the Iraq war (when he was an irrelevant senator) and called it a "mistake," he would subsequently ally with Islamists and authorize regime change in Libya when he was President. Libya, under Gaddafi, was the most prosperous African nation and now, after his demise, it has open air slave markets and is marked by sectarian violence. When Hillary Clinton was asked about military intervention in Libya, she said "we came, we saw, he died", and then she proceeded to laugh.

The concept of "wokeness" is based on an individual knowledge and concern about social and economic issues and therefore reinforces the notions of personal achievements and marginalizes social change, in a rather absurd form. Misery and oppression, or rather concern about misery and oppression, should definitely not be a competition. It should be noted that this is not an indictment of "identity politics," whatever that term means, but rather the superficial use of identity to disguise injustice and present a liberal pluralist face of oppression. It is also an indictment of society's "call-out culture," where individuals are idolized - until they question official dogmas and fail to live up to their roles as deities, as all humans eventually will, at which point they are ruthlessly attacked and cast aside. What is instead necessary is education and a culture of tolerance rather than individual purity.

Perhaps the mothers of the 40 Yemeni children murdered by Lockheed Martin weapons when Saudi Arabia, a country infamous for its brutal oppression of women and persecution of LGBT people, decided to bomb a school bus, should answer whether they feel "empowered" by the fact that a woman is the CEO of Lockheed Martin. Perhaps the Vietnamese people who suffered under the brutal napalm attacks carried out by the United States should answer if the burns feel better knowing that CEO of the production company is gay. As Pulitzer prize winning journalist, Glenn Greenwald, states, "militarism and aggression don't become more palatable because the institutions that perpetuate them let women and gays participate." As Caitlin Johnstone eloquently stated, "true feminism means turning away from the toxic valuing system which elevates the most ambitious sociopaths and toward one which values empathy, collaboration, nurturing and peace instead." Human rights, justice, and freedom cannot be realized through lionizing certain individual and celebrating diversity amongst oppressors, but rather through collective action and dismantling systems of oppression.

# **Brutalism** is Beautiful



One of the most universally disliked structures on campus is the Mathematics and Computer building. Part of this sentiment may arise from the fact that what students experience inside is nothing short of suffering, but I would argue that this is a common trait shared between many locations. What sets MC apart from the rest is the looks. With its imposing concrete façade, many students have described it as depressing and giving off the same aura as a prison cell.

When MC was constructed in the 1960s, a style of architecture was experiencing its peak in popularity: Brutalism. Definitive properties of the movement included bare concrete,

geometrical design, and a lack of any decorative elements, a stark contrast to the more ornate designs that were popular in the pre-war era. It symbolized order, strength, and a certain humility in the years after World War II, in part due to economic struggles and in part due to ideological changes

These ideals, in my mind, embody precisely what is taught within the building. Mathematics is clear, orderly, and objective, the truths that it sets are eternal and unchanging: order. Mathematics is a fundamental field of study that serves as the basis for understanding the world: strength. Mathematics is not about producing fancy results; it's about producing correct and necessary results: humility. The imposing and almost subjugating aura that the building gives is what should be felt, and it serves well as a constant reminder to the importance of what is taught within.

As another example, consider the Dana Porter library. Roughly designed around the same era, it too bears the ideals of Brutalism at its core. Stern concrete walls, perfectly geometric construction- and it too encases that which fulfills the ideals. The books stored within bear knowledge, that which has been passed down to us from our precursors in order to be learned from and furthered, in order to build a better future. Especially as an academic institution, these books represent the peak of order and are what gives us all the strength to pursue the studies that we do.

Today's world has rapid changes. Society's ideals vary quicker than people can follow, and what may be the newest trend one week could simply vanish in the next. As everything from the political climate to popular culture seems to be going in directions that we cannot predict,

there is a desire to hold on to what objective truths remain. The ideals that Brutalism embodies, the permeance of it all offers a reprise to our fast-paced world. MC and DP standing central in our campus should be looked at not as ugly buildings, but as beautiful bastions of knowledge that stand firm, regardless of how the world they stand in may change.





# Award Yourself, and Others!

THOMAS DEBENSKY
VP ACADEMIC

Hey readers! For the second exec article of the term, we're going to talk to you about the different awards that you can apply for and win for yourself or fantastic faculty and staff!

Win \$1000! The Engineering Society Leadership Excellence Award recognizes exceptional displays of leadership within the University, Faculty of Engineering or community-at-large. Applications are open to all full-time engineering undergraduates in all programs.

One award is presented to a full-time upper year undergraduate engineering student. Candidates must have attained an average of 60% in their most recent academic term.

To apply, submit (June 15, 2019) your resume, in addition to a detailed description of all leadership roles undertaken and a letter explaining how your leadership roles have had an impact or importance to the University of Waterloo, the Faculty of Engineering, or the Waterloo community (1-5 pages). For full details see bit.ly/AwardsS19. Applications can be submitted in person at the EngSoc Office (CPH 1327), or via e-mail to awards@engsoc. uwaterloo.ca.

Recognize a prof for their good teaching! Do you want to go above and beyond to congratulate your prof because they've gone above and beyond to ensure your academic success? Nominate them for the Engineering Society Teaching Excellence Award! The award rewards professors, lecturers, or laboratory instructors who have employed non-conventional teaching techniques, allowed opportunities for experiential learning, and/or showed a commitment and dedication towards ensuring academic success for students. Nominations are due Wednesday July 10th and are available on

the EngSoc website at https://www.eng-soc.uwaterloo.ca/about-us/awards/faculty-awards/. Nominate people today, and email teachingaward@engsoc.uwaterloo.ca if you have any questions.

Want to help get money for student groups? EngSoc Sponsorship Applications are open for Spring 2019! Each term, the Engineering Society allocates a certain percentage of the budget towards the Sponsorship Fund. This fund goes towards supporting University of Waterloo student teams and groups. All University of Waterloo student teams and groups are eligible to receive sponsorship. Any student team or group who is interested in applying to the fund should fill out the sponsorship form on https://www.engsoc.uwaterloo.ca/ finance/sponsorship/. Applications are due July 3rd at 11:59pm! A representative from your group must be available on July 6th sometime between 10:00 am and 4:00 pm in POETS (CPH 1337) to give a presentation about your proposal to the sponsorship committee. This is a required part of the application process. If you are late to your presentation time without informing the VP Finance, you may not be allowed to present and will therefore forfeit your application. Things that EngSoc generally does not fund include food, swag/ merchandise, travel expenses, accommodation, and co-op students. Any questions can be addressed to Michelle Teplitski at vpfinance.a@engsoc.uwaterloo.ca.

Reward someone for caring about student mental health! The Engineering Society "Friend of the Society" Award is now accepting nominations! If you see a faculty or staff member advocating on behalf of students to eliminate elements that have negative effects on student mental health, showing a long-term commitment and vested interest to the betterment of student mental health, and/or taking action to directly improve the mental health of students, then this is the award for them. Nominations are due Wednesday July 10th and are available on the EngSoc website at

https://www.engsoc.uwaterloo.ca/about-us/awards/faculty-awards/. Nominate people today, and email friendaward@engsoc. uwaterloo.ca if you have any questions.

Note the deadlines and honefully this

was helpful knowledge for rewarding yourself, your profs, and other awesome people in Engineering.



# Engineering Society Leadership Excellence Award

# Apply for a \$1000 award for Exceptional Leadership!

An award, valued at \$1000, will be presented to an on-term Engineering undergraduate student who has displayed exceptional leadership within the University, Faculty of Engineering, or community at large.

Submit application in person at the Orifice (CPH 1327), or via email to awards@engsoc.uwaterloo.ca.

For more information on the application, visit: http://bit.ly/AwardsS19



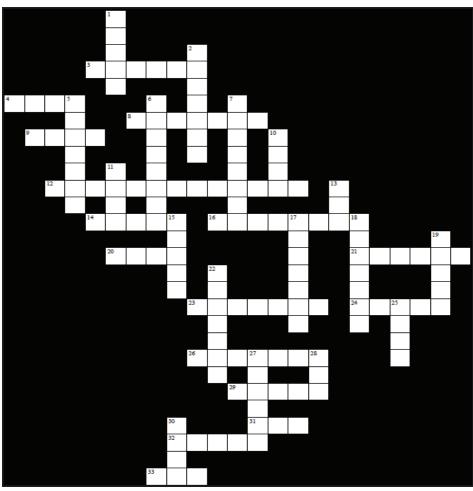
					Upc	oming Ever	nts Calendar
Wednesday June 12	Thursday June 13	Friday June 14	Saturday June 15	Sunday June 16	Monday June 17	Tuesday June 18	Check out up-to-
De-stress Origami 10:30 AM - 2:30 PM POETS	Maker Space- PCB Workshop 5-7 PM Ideas Clinic			NBA Finals 9- 11 PM POETS	Engiqueers 5- 9 PM POETS		the-day event postings on the EngSoc website at engsoc.uwaterloo. ca/event-calendar/
RAISE Panel- Bias in Artificial Intelligence 5-7 PM E5 3101	NBA Finals 9- 11 PM POETS						
Wednesday June 19	Thursday June 20  Maker Space 5-7 PM Ideas Clinic	Friday June 21	Saturday June 22	Sunday June 23	Monday June 24  Bitch 'n Stitch 6-9 PM POETS  Community Meals 7-8:30 PM E7 Atrium	Tuesday June 25	

# The Iron Crossword

## **Special Units**

#### **DANIEL MCCORMICK**

**2B COMPUTER** 



#### **ACROSS**

- 3. Mechanical Dance
- **4.** Prestigious recognition of love?
- 8. Difficult up top
- 9. Returning mute dog
- 12. Broken Toilet

ON INQUISI

- **14.** Shocking Estimate
- 16. Twice CS teaching youth
- 20. Friends Awaken Justice
- 21. Bottomless, oddly, a used noun he wrote
- 23. Computer counting everything hand

24. In established furniture

- 26. Reportedly reliant in pool
- 29. Back to espreso ogling
- **31.** Origin of Goose!
- 32. Linear Algebra Pair
- 33. I am at the center of everything

#### **DOWN**

- 1. Roughly in Canadian Winter
- 2. Finished with engineering
- 5. Albertan Math
- 6. Fewer Computers
- 7. Charting Italian-Chinese Beans
- 10. Road Raging Bird
- 11. Criticize every coop endeavour
- 13. Don't start learning my child
- 15. Illiterate Grains
- 17. East European Race
- 18. Seriously Narcissistic
- 19. Geometric Perceptive Perspective
- 22. Adept Clue
- 25. Interesting beverages!
- 27. Fake Call
- 28. Don't Worry, Engineering
- 30. Weed-out software

This is a cryptic crossword, which means that it will make up for in obtuseness what it lacks in words.

## Sudoku

#2019-06

#### **JANNY WANG 2B NANOTECHNOLOGY**

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

#### Medium

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

Hard

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

Solutions for previous crosswords can be found on The Iron Warrior's website at iwarrior.uwaterloo.ca/distractions.

# "When's the best time to start an assignment due at 11:59 PM?"



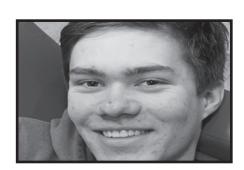
"The due date is the do date" Manal Fatima, 2B Nano



"Start early enough so you can ask questions" Claudia Nashmi, 3A Civil



"Depending on what my colour coded schedule foretold" Lisa Devlin, 2B Nano



"Midnight" Nicholas Pfeifle, 1B Nano



"A few days before" Alexander Goldgruber, 2B Civil



"It ranges" Kelsey Black, 3A Mechanical