

## Saudi Journalist Murdered in Turkey

Middle East Tensions Intensify as Jamal Khashoggi Killed in Saudi Consulate



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2T SOFTWARE

Jamal Khashoggi – a journalist, author, and editor-in-chief of Saudi Arabia's Al Arab News Channel – has been declared dead. His death has been ruled as premeditated murder.

What makes this instance of murder so interesting?

One, the lead suspects involve some of the top leaders of Saudi Arabia. Two, the murder took place at an embassy consulate in Turkey, bringing in the question: do the murderers have diplomatic immunity? Which country has legal jurisdiction over the scene of the crime, and, which country will oversee the investigation and trial?

For those of you who are lost about what's happening, let me walk you through it. The entire story has had a lot of twists and turns. So, it's important that we get all the facts we have as of now, straight.

On September 28, Jamal Khashoggi visited the Saudi consulate in Istanbul to obtain a document that would certify his divorce from his ex-wife. He was asked to return later, so he went back to the consulate on the October 2. As per

an article by the BBC[1], he had no apprehensions going back to the consulate as he had been treated well on his first visit.

However, he did ask his fiancé, who was waiting for him outside the consulate, to call an adviser to the Turkish President if he did not come out. He headed in at 13:14 local time and was never seen coming out.

For a little over two weeks since the events took place, the Saudi government consistently denied knowledge of anything of this sort happening. However, on the October 20, their state television reported that the journalist had been murdered in a rogue operation and promised to punish those behind it.

Their version of the story is that Khashoggi was killed in a choke-hold when he resisted attempts to return to Saudi Arabia. His body was handed for disposal to a local aid. They also announced the arrest of eighteen Saudi nationals and the dismissal of two officials in connection with this.

A couple days later, the public prosecutor of Saudi Arabia was quoted saying that the murder was premeditated. This happened around the same time a joint Saudi-Turkish task force started investi-

gating the matter

Turkey, on the other hand, has a slightly different version; they say that a team of Saudi nationals had arrived in the country in the days preceding the murder and that care had been taken to remove security cameras and surveillance footage from the building prior to the journalist's arrival. They claim to have audio and video evidence of what actually went down on October 2. Some other Turkish officials claim that he was killed within two hours of arriving at the consulate and that his body was later dismembered. They have video footage that shows some diplomatic vehicles entering the consulate at 12:13 on October 2. These same vehicles were seen leaving the consulate at 15:08 on the same day and entering the consul's residence.

The Turkish police have seized samples from the consulate and the Saudi consul's residence xxfor DNA testing.

So far, there has been no sign of the body

Canadian Prime Minister Justin Trudeau condemned this act and has decided to pressurize Riyadh by freezing a deal that would provide Saudi Arabia with armored vehicles. Germany too has decided to suspend the export of weap-

onry to Saudi Arabia. The UN special rapporteur on extrajudicial, summary or arbitrary executions said "[the] killing of Jamal Khashoggi bear[s] the hallmark of an extrajudicial execution". She further said "[W]e have enough right now to determine that the government of Saudi Arabia is responsible and is implicated." [2]

As far as the jurisdiction of this case is considered, it does fall under Turkish authority. To quote an answer on Stack Exchange "if Turkey were to obtain custody of people it accused of doing the killing, and if those people were not accredited diplomats, it could try them under Turkish law." [3]

But as there is much doubt in who exactly called the operation and who murdered Khashoggi, the probability of this happening is questionable.

[1]<https://www.bbc.com/news/world-europe-45812399>

[2]<https://www.aljazeera.com/news/2018/10/official-khashoggi-victim-extrajudicial-execution-181025195717558.html>

[3]<https://law.stackexchange.com/questions/32863/what-is-the-jurisdiction-of-the-khashoggi-murder-case>

# Letter From the Editor

## Let's Talk Housing – a Major Topic in the Recent Municipal Elections



**RAFIQ HABIB**  
EDITOR-IN-CHIEF

Before I begin, I want to thank everyone that contributed to this issue. We have many interesting events and developments that are covered in this paper, from the selection of the Canadian Surface Combatant design to the revelation that a Washington museum didn't realize that a number of its Dead Sea Scroll fragments were fake. Kirsten has written an update on the carbon tax debate she covered last issue to keep readers up to speed on new announcements regarding the federal carbon tax policy and implementation.

We also have our first Prof Personalities piece this issue, courtesy of Kaaru, who interviewed someone those of us in Management, Mechanical, and Chemical Engineering know well: Rohan Jayasundera. This interview answers all the questions that students have wanted to ask him and is a must read. I know that everyone that's had a class with Rohan counts him as one of their best and most memorable professors, and I speak for everyone when I say that we wish Rohan all the best in his post-retirement endeavours when he retires at the end of this term.

Last week, municipalities across Ontario and Canada went to the polls to elect their city and/or regional councils. One issue that seemed to come up everywhere, but especially in big cities, was housing. Mayoral debates in both Vancouver and Toronto focused on the affordability crisis in the housing market and how to best deal with a tight housing supply.

This is a topic that has a tremendous impact on us as we look for student housing here in Waterloo, as well as co-op housing across the country. In all major cities, rents are sky high and home ownership seems like a daunting goal for many of us as we look into the near (post-graduation) future. This is even truer if we ever hope to own more than a 300 square foot studio condominium or spend less than 40% of our future income on rent.

The fact of the matter is that we are very limited with regards to how much land we have in the city. There is a large disconnect regarding how to best make use of the remaining free land. Developers seem to believe that maximizing the height of their

projects and cramming more, smaller units on a floor plate is the easy answer. That way, the largest number of people can live in the smallest land area. And while this approach may work well for "young professionals", it gives little room for families. Many of us have grown up in larger spaces – whether that be a house, townhouse, or a larger condo/apartment – and would hope for a similar situation if and when we have our own kids to raise. Current homeowners, on the other hand, want to keep their neighbourhoods as they are, free of skyscrapers towering over their backyards and covering their streets in an eternal shadow. Recent development history has shown that new projects have a tendency to replace small community shops with lifeless glass facades, to break the character of neighbourhoods, and to increase the cost of living in communities by introducing more expensive "high-end" stores; it's no surprise then that the "Not in my Backyard" (NIMBY) culture exists in most neighbourhoods. There is an animosity between developers and communities, and there will be no solution to the housing crisis until this divide can be closed.

Cities need to come up with a new way to address housing, one that does not pit neighbourhoods against developers and make communities fearful that a blocky grey abomination is posed to destroy every parking lot on their street. There are four major concepts that can stop the increasing resentment and get city building to work for both current and future residents.

First, the indiscriminate tower-building in the city needs to stop. It's the easy way out of creating more housing and does not take into account the surrounding neighbourhood. Instead, we need gentle densification in older neighbourhoods (such as building townhomes adjacent to an established neighbourhood of houses), and creating a density gradient that allows for some transition from single-family homes to townhomes to low/mid-rise and then to high-rise towers. This way, communities do not feel as displaced or victimized by the projects and there is more flow and transition to the community's character.

Second, streetscape protections and standardizations need to be introduced into individual neighbourhoods that ensure that developers maintain or improve the cohesiveness and character of streets. Currently, most developers seem to barely glance out of their plots when designing

their sidewalk and public realm features, resulting in a mish-mash of street fronts that vary in quality from building to building. A city mandated public realm such as what has been attempted in Queen's Quay in Toronto creates a more unified community feel. Kitchener-Waterloo seems to have done a better job of this as far as protecting and incorporating heritage facades goes, but will have to ensure they keep this in mind as developers eye uptown regions for densification.

Third, a better architecture screening framework needs to be developed. Right now, developers seem to opt for more bland designs and cheaper materials to increase margins; this leaves the public with an eyesore on the skyline for the foreseeable future. Whether it be a new neighbourhood review panel or community board, neighbourhoods need more say in the designs that are coming to their streets and need the ability to hold developers to account if they fail to satisfactorily execute their project designs. This is especially important for high-rises that have an impact on skyline views. Now I get that not every building will be a masterpiece in architectural form, but it is inconceivable that there is nothing better than grey spandrel or white frit when it comes to exterior design.

Finally, cities need to have some way of creating sustainable and affordable housing units. With the Greenbelt restricting urban sprawl, this puts municipalities in a very tight situation. There is very limited opportunity to strike a balance between free market development, which follow supply and demand equilibrium prices, and government policy for affordability, like rent-to-own program or lower rate rentals. How can rent-to-own programs or below market rate developments be run in a manner that supports the less fortunate without exacerbating the housing crisis for those that can afford market rates? This is where public discourse needs to come in. What do the citizens of the city want their housing policy to look like? Municipal elections have just taken place, but they have been plagued by tight races or voter apathy. For these reasons, a citywide approach has a large chance of failure. Instead, power needs to be given back to the neighbourhoods so they can individually decide how to grow and build communities for the future. Any less, and we will never bridge the divide between builders and communities.

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**Fall 2018 Publication Schedule: September 28, October 17, October 31, November 14, November 28**

THE IRON WARRIOR

The Newspaper of the University  
of Waterloo Engineering Society

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## Meet the Rising Tide



**SELINA HSU**  
1A MECHATRONICS

When we think about long-term climate change, we often look only towards end of our current century. The conversation is about what happens by the year 2100 - what cities will be underwater, what the global temperature will be, how the different the world will look. It leads to a bias that lets us forget a startling yet not-so-surprising

reality: even if the entire world stopped emitting greenhouse gases today, the sea would still continue to rise for hundreds and hundreds of years.

Rising sea levels have become locked-in as an effect of climate change, which means that the future changes to come are irreversible. This is attributable simply to the fact that ice takes time to melt. It will be an ongoing process as the change of state catches up to its warmer environment.

With regards to rising temperatures, the most realistic estimate currently predicts an increase of 3.2 degrees

celsius by the year 2100. It comes from the IPCC (UN Intergovernmental Panel on Climate Change), which releases reports containing different possible scenarios for the future state of the environment. However, it actually is possible for the global average to stop rising after the year 2100. This happens in the most ideal scenario where carbon dioxide emissions are rapidly reduced and we eventually have a means of producing negative emissions (i.e. taking carbon dioxide out of the atmosphere) in the future. Meanwhile, all predictions from the IPCC (UN Intergovernmental

Panel on Climate Change) show that sea levels can only continue rising.

The youngest people alive today will be alive to see 2100. Anything beyond then, we so far have no connection to. However, even though the big headlines stop after 2100, climate change doesn't. As projected by the IPCC, "it is virtually certain that global mean sea level rise will continue for many centuries beyond 2100, with the amount of rise dependent on future emissions."

Therefore the sea level will keep rising for basically forever.

## A Tribute to Paul Allen



**KAI HUANG**  
2A COMPUTER

On 15 October 2018, Paul Allen died of septic shock, caused by complications from non-Hodgkin lymphoma at the age of 65. While most know him only as the Co-Founder of Microsoft, he was a man of many interests whose work had a profound lasting impact in a variety of areas.

Allen had an interest in space travel, which was first evident in 2004, when he was the sole investor backing the SpaceShipOne commercial suborbital spacecraft venture. The craft became the first privately funded effort to successfully put a civilian in suborbital space. He then went on to create Stratolaunch Systems, a proposed orbital launch system that would feature a jet aircraft ferrying a rocket to high altitude which would then separate and climb into orbit with its own engines. Test

flights are currently proposed for 2019 and 2020, and if successful, would be the first privately funded space transport system.

Allen also took steps into sports team ownership and had a significant effect on the Portland Trail Blazers and the Seattle Seahawks. He purchased the Trail Blazers for \$70 million in 1988, and invested much of his time and money into the development and funding of their new arena, the Moda Center, finally purchasing it in 2007. He purchased the Seahawks in 1996 when they were under pressure from their former owner to move to Southern California. A former Seahawks minority owner, Herman Sarkowsky, remarked "I'm not sure anybody else in this community would have done what [Allen] did."

Allen, together with his sister, pursued filmmaking as the owners and executive producers of Vulcan Productions. Many of their films, especially documentaries such as Racing Extinction and Body Team 12, have been nominated for academy awards. In 2013, they co-

produced the film Girl Rising, discussing the issue of education for girls in various parts of the world. The film helped raise over \$2.1 million to help with this cause.

Allen purchased an offshore service vessel in 2016, naming it the RV Petrel, and putting it through an extensive retrofitting in 2017 to become a deep submergence research vessel. Coordinating with historical organizations, Allen's goal was to explore historically significant wrecks in the most challenging depths and conditions. Some of their most notable finds were the USS Indianapolis in August of 2017 and the wrecks of the entire Japanese attack force in Surigao Strait in November of 2017. In early 2018, Allen's team on the Petrel also found USS Lexington, USS Juneau, and USS Helena.

These are only a few examples of the innumerable fields that Allen had an impact in. Many of us, as engineers, know him for only his most famous role at Microsoft. He, like anyone else, had his own interests and hobbies, and he deserves immense respect for being



Miles Harris via Wikimedia Commons

**Paul Allen, philanthropist and co-founder of Microsoft**

generous enough to use his resources to make a lasting impact.

## Fake Dead Sea Scroll Fragments Found in Museum

Washington Bible Museum Reveals That 5 of 16 Scroll Fragments in Its Collection are Fake



**STONE HE**  
2A MECHANICAL

Museum exhibits usually give us a glimpse into the past. They usually display artifacts such as craftwork, writings, and clothing based on what ancient and early civilizations would have used. But what if one of those artifact were fake? Or maybe 5? It appears that in the Dead Sea Scrolls exhibit in Washington's Museum of the Bible, 5 out of the 16 scroll fragments have been determined to be fake.

On October 22 it was confirmed that some of the scrolls were not in fact original fragments, although there were already questions about their authenticity since the opening of the Dead Sea Scroll Exhibit on November 2017: inconsistent handwriting and content across the texts had created some serious doubts about the origins of the scroll fragments. These inconsistencies were the decisive piece of evidence that led to a team of German scholars concluding that at least 5 fragments were not real.

The Dead Sea Scrolls were ancient Jewish texts written in mainly Hebrew, with some written in Greek, Aramaic, and Nabataean Aramaic. These texts were written nearly 2000 years ago and most of the scrolls were lost or destroyed by the natural elements. However, there were several scrolls that were well preserved and kept that were discovered in the mid-20th cen-

tury on the west shores of the Dead Sea.

Most of the scrolls and fragments of the scrolls were tightly controlled by the Israeli Antiquities Authorities, to ensure the protection and authenticity of the scrolls. But by 2002, there were a huge surge in scroll fragments that started to appear out of nowhere. Along with museums, there were many American Evangelical Christians who were eager to get their hands on owning a piece of these sacred texts due to their historical significance and spiritual value. After the discovery that some of the scrolls might be fakes, many

of the people who bought fragments of the texts are just beginning to realize that they might have been scammed with a facsimile and robbed of thousands or even millions of dollars.

The Green family, large contributors to the museum who played an instrumental role in its opening, also bought many fragments of the texts. They were asked earlier in 2017 on how they acquired the texts, but Steve Green wasn't sure of who sold them the texts. However, they have been known for getting in trouble with the justice system in terms of acquiring an-

cient artifacts in the past. In one instance, they had smuggled looted artifact from around the world and were forced to return these artifacts and pay a 3 million US dollar fine last year.

The fake Dead Sea scrolls that were discovered may have an affect on the museum's credibility. However, it is important to know next time where an artifact is obtained from, and whether there could be any credibility from where it came from. In addition, there should be more research next time to prevent having another fake historical artifact on display.



SAUL LOEV/AFP/Getty Images Under Fair Use

**The Dead Sea Scroll Exhibit at the Washington Bible Museum**

# Canada's Future Warships Selected

## British Type 26 Frigate Wins Design Competition for Canadian Surface Combatant Project



**KAI HUANG**  
2A COMPUTER

The Canadian Navy's current surface fleet primarily consists of 12 Halifax-class frigates that entered service in the 1990's. The Liberal government, in their defense policy review, recognized that the Halifax-class would need a replacement by the 2020's that improves on wide-area air defense and anti-submarine warfare (ASW), as well as surface combat. Three proposals were submitted in 2017: the British Type 26 frigate, The Dutch De Zeven Provinciën-class frigate, and the Spanish F-105 frigate.

On 19 October 2018, the government announced that the Type 26 was the chosen design, with procurement moving on to the next stage: negotiations with Lockheed Martin Canada and BAE Systems to confirm that they can deliver on every aspect of the complex design. The specific terms of the deal would cover the construction of 15 vessels as well as the associated equipment and services. The prime contractor for the vessels would be Irving Shipbuilding in Halifax, NS. Integrated into the Type 26's core design would be innovative high-tech platforms from many Canadian companies such as CAE, MDA, L3 Technologies, and Ultra Electronics.

The core armament on the Type 26's design features 24 vertical launch system (VLS) cells for the British Sea Ceptor surface-to-air missile, as well as another 24 Mark 41 VLS, which primarily utilizes American weaponry, such as the Sea Sparrow missiles, and Tomahawk land attack missiles. This would be a significant boost over the Halifax-class, which does not have any VLS cells and is only able of carrying 16 Sea Sparrows and 8 dated Harpoon anti-ship missiles. The Royal Navy variants of the Type 26 also carry a 127mm main gun, which, if chosen for the Royal Canadian Navy version, would also be a significant upgrade from the Halifax-Class, with its 57 mm automatic cannon.

The existing designs also use American Phalanx Close-In Weapon Systems (CIWS) for local defense, and utilize towed and fixed sonar arrays. A flight deck is present on the rear of the ship. Canadian variants would likely be similar, with a Sikorsky CH-148 Cyclone helicopter being deployed for ASW purposes. BAE Systems pitches the Type 26 as also being less prone to early obsolescence as it is designed with technologically advanced digital elements in mind, which can be updated throughout the years.

It is currently expected that the contract will be formally awarded in 2019, with construction beginning in the early 2020's. There is not yet a formal time frame on when the first ship is expected to be complete. Concerns have arisen of Irving's capability to build the frigates. If the contract were to be delayed, they would likely have to lay off workers in their downtime after their current project is completed, which would only slow down the schedule further with the time it would take to rehire them and familiarize them with the new design. Given Canada's history with military procurement, it would be all too naive to assume the process will



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A rendering of the Type 26 frigate

go without a hitch.

Regardless, the new frigates represent a major step up in the Royal Canadian Navy's capabilities. These will be the

first truly modern vessels in our arsenal and also allow for improved synergy with many of our allies around the world that utilize shared systems. Once

the fleet is replaced with 15 of these new vessels, a new era for the Navy will begin.

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**DR. STEVEN J. COOKE**

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Steven J. Cooke, PhD, is the Canada Research Chair in Fish Ecology and Conservation Physiology and the founding Director of the Canadian Centre for Evidence-Based Conservation. Cooke is the Chair of the Sea Lamprey Research Board of the Great Lakes Fishery Commission and Past President of the International Section of the American Fisheries Society. He is also a Fellow of the Royal Canadian Geographical Society, Fellow of the American Fisheries Society, Secretary of the College of the Royal Society of Canada. Cooke is a proud UWaterloo alumnus (BES 1997; MSc 1999).

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# Prof Personalities: Rohan Jayasundera

**KAARU SELVARASA**  
1A MECHANICAL

*Rohan Jayasundera is a physics professor, who will be retiring after this term. He was born in Colombo, Sri Lanka, and moved to Canada in 1974, where he pursued his life-long interests in math, physics and education. I managed to arrange an interview with him, despite his busy schedule, to ask him some questions that many of his students, including myself, have been wondering.*

**What motivated you to become a professor? Was teaching something you've always been interested in?**

Yes, teaching was something that was probably in my blood because generations of my family were teachers. My grandmother was a teacher, my aunt was a teacher, I'm a teacher, my daughter is a teacher, so I think that's 4 generations now altogether. But I always enjoy it and when I see my students talk to me and all of a sudden understand things, their faces light up, and that's a joyful moment for me. That's the type of joy which really got me going into teaching.

**Name any quote or philosophy that has been central to your life and the way you choose to live.**

The philosophy that I have is, "Whatever you do, you should do it with pride, or you shouldn't do it at all." So, whether it's teaching or any other job that I do, I take pride in it. And there are certain things that if I think I cannot take pride in doing it, I won't do it. I advise my students the same thing because if you take pride in what you do, you do a good job, and if you do a good job, you make your customer happy. If the customer is happy, it shows, and then you go home happy yourself, and there is no dollar value you can put to that happiness.

**Where do you get your jokes from?**

[laughing] Well the jokes, first of all, come from one of my mentors. I had a mentor by the name of Phil Eastman, he had a lot of physics jokes. He's also the founder of the Isaac Newton exam which I run now. He always had a good sense of humour, and I thought that it would be the best way to teach physics because when I'm teaching, after 20 minutes, students need a break. So rather than telling them to take a break, I tell them a joke. It puts their minds at ease. Laughter is very important in life. And when you start laughing in class, you're re-energized, so now I can teach you for another 20 minutes without any problems.

**So you find that jokes are a good way to engage the class?**

That is the main reason I use jokes in class, to get you engaged. By the way, I've heard people saying that sometimes they don't remember the content I taught them, they only remember the joke, but it doesn't matter. [laughing]

**Can you tell me more about your research on education?**

Yeah, this was something that fascinated me for a long time. A lot of people don't care about education. They think that okay, if you know the subject, then you're the best person to come to for that but it's not just about knowing the subject, it's the ability to convey the message to your students. And there are various ways students learn. You have to try and understand, are they surface learners? Are they deep learners? What ways do they have to learn? And then you have to consider all these things. Especially when you have a big class, how are you going to create a lecture that everybody will enjoy? And then, before doing a lecture, you have to think very hard, write your set of notes, and consider the best way to do it, which is what I have been doing. It didn't happen overnight. In the past, after every lecture, I used to come to my office and write down the questions my students asked. Then I would go back and change my notes so that the next time I had to deal with that lecture I would have answers to those questions already embedded. So, in this way, my lectures got better as the years progressed, and now as you would have seen, it is very seldom that people ask me questions, even if I stop and ask them, because most of the answers to the questions are embedded in the lecture.

**Would you ever consider coming back to teach as a substitute?**

That's something that a lot of people have been telling me to do. They have been bugging me that I shouldn't retire, and that I should definitely come back and teach. But at least for a couple years, I'd like to see the youngsters in my department pick up the slack and promote their ideas. If I come here, even as a sessional, then it would still be my ideas coming forward. I like the department and the faculty, and the young professors should start doing things on their own. So the short answer to your question is no. But will I be teaching? Yes, I'll be teaching various things that I like to do.

**So, you plan on teaching more after you retire? What do you want to do after you retire?**

As you know, we both have Sri Lankan heritage, and there a lot of people who can benefit from our knowledge, so I may do some missionary work

**What is your favourite passage from the Bible?**

Actually, there are several passages I like but if I had to talk about the commandments, I think I love the second commandment, which is "Thou shalt love thy neighbour as thyself." That's the thing that should govern everybody's life. It is a very powerful statement. Practising it is very difficult, but I try my best to do it.

**So on that note, what is your favourite**

**dirty movie?**

[laughing] Once again that's a joke. Being a Catholic, I try to avoid watching any dirty movies. No, I just make fun of it to get the students motivated more and more, but what to say? No dirty movies. [laughing]

**Where do you see the field of physics (or engineering) going and what do you think is going to be its impact in the future?**

Well, I think the impact is tremendous. I think in every way, technology is improving in such a great manner. With the students that we have now, with their curious mindsets, the future is very, very bright. And I have the luxury of teaching the elite in Ontario, so I'm very grateful for that as well. And I know you guys will eventually turn things around. I have been very lucky to work with Professor Strickland, we taught a course together and that will always stay as a great honour for me. The impact of that itself is huge. I think the programs we have at Waterloo and the dedicated faculty we have at Waterloo will guide our students into very, very strong positions in the future. But I still like to tell my students, whatever you do, do it with pride, or don't do it all.

**You keep coming back to that idea. Is this something you tell all your students?**

Yes, I tell that to all my students. If you take pride in what you do, you do a great job. And if you can do a great job, you succeed in life. Because what is success? It is not the dollar value you have in the end, it is the happiness you take when you go home. And if you can leave this place and go home and stay happy and say "Yes! I did my job," well, there is no dollar value you can put to that.

**So you don't think of teaching as a job but more like what you've always wanted to do with your life?**

I think teaching has to be a service. It should never be a profession. A lot of

people think that you teach only because you get a paycheck. No, you teach because you see students succeed in life, and that's the greatest joy you can have.

**If you weren't teaching, what would you see yourself doing?**

It'll be something teaching-related I believe. I think every one of us has this teaching quality in us. Say you are having an argument with somebody. Even when you fight with that person, you are teaching that person something. Teaching is something we all have, so no matter what I do, there will be some teaching involved.

**What is your best advice for first-year engineering students?**

There are several things I want to say to first-year engineering students. I think that the sooner you learn how to become a professional student, the better it is for you. A lot of students coming from high school have this high-school mentality and are brought up by helicopter parents. You have to get out of that mentality as soon as possible and learn how to extract information from every person you see. You cannot say this is my learning style, I need a teacher who can cater to me. You should be able to change your viewpoint and extract information from anybody willing to give it. That's what makes a professional student.

**Is there anything else you want to add?**

I'll miss my students. I have two children of my own, but I always think I have 2000 children here when I come and teach them, so I'm going to miss all of my students. I think my students know that I always had a love for them, and always wanted to see them succeed. The love will always be there.

**Before you go, would you rather kiss your wife or a beautiful physics question?**

Always a beautiful question, ha ha.



via Waterloo Department of Physics and Astronomy

The Newspaper of the University of Waterloo  
Engineering Society since 1980

**THE IRON WARRIOR**

Published biweekly in print and online at  
<http://iwarrior.uwaterloo.ca>

# A Unaffiliated, Freelance Comrade's Take on the Events in Xinjiang

**JANNY WANG**  
2A NANOTECHNOLOGY

Amidst the general state of disaster of modern affairs, China – with its glitzy industrializing wealth and famously polite tourists – looks to be having a sort of golden age. Xi Jinping's quiet, politely dictatorial manner seems noble and pleasant compared with Trump's irascible tweeting and Putin's habit of poisoning all and sundry.

It is to the great benefit of America and Russia that President Xi is beneficent as well as majestic; recognizing that his compatriots light could not but seem dim compared to his radiant communist glory, he has deigned to allow them to save face by filtering his magnificence through a few

trifling human rights scandals.

The traditional avenue for this has been through Tibet, but President Xi is innovative as well as wise, and has taken care to ensure that Xinjiang is not entirely neglected in this portioning of autocratic ardor.

President Xi has always had a close and loving relationship with the loyal, communist citizens of Xinjiang, but lately Beijing has stepped up the love by building free "vocational centers" to combat extremism.

There was some initial controversy, as aerial pictures from the United Nations showing these camps were roundly denied by Communist Party officials, in a surprising show of diplomatic modesty. At the time the pictures were taken, the vocational centers did not yet exist. There was a minor

bureaucratic obstruction to their existence; Party officials were so distracted by the great and weighty love that they bore the Uyghur people that, in their haste to set up the proper infrastructure, they had forgotten to formally legalize the proceedings.

By the wisdom of President Xi, this issue was resolved on the 10th of October, when the provincial government of Xinjiang legalized the re-education camps, whereupon they began existing.

These vocational camps have exploded in popularity, with over one million Uyghurs "willingly" entering them to learn about the glory of Communism and President Xi. According to Global Times, an unbiased PRC state publication, de-extremism efforts "changed local lives for the

better".

One man, who had his life changed for the better, was Jurat Memet, who bravely shared his story with the Global Times. A 'get rich quick' scheme gone wrong landed him in a radical Islamic training camp, where they 'acquired assassination skills' and were only allowed to eat peanuts, but fortunately, the Chinese government arrested him and sent him to a training center, where vocational training and love for the Party has allowed him to turn his life around.

Unfortunately, UN officials believe such camps are unlikely to work in other countries, because trainees would not be as motivated without a powerful and benevolent leader like Xi Jinping to guide them.

## Hurricane Cripples 10 Percent of US Raptor Fleet Numerous F-22s Damaged as Hurricane Michael Wreaks Havoc on the Florida Coast



**KAI HUANG**  
2A COMPUTER

In the beginning of this month, Hurricane Michael tore through the southeast United States, carving a path of destruction through the entire region. Right at the edge of the Florida seacoast where the storm first made landfall lies Tyndall Air Base, home of 55 F-22 Raptor fighter jets.

The F-22 raptor is considered to be one of the most advanced air superiority fighters in the world. At a hefty price point of around \$150 million USD per aircraft, production was halted in 2009 after only around 180 jets were finished, and the assembly lines modified to prepare for F-35 construction.

Standard operating procedure for the U.S. Air Force to prepare for a natural disaster that may impact the fleet is to fly the aircraft to a safe location for the time being. However, the F-22 is a finicky aircraft. Being heavily maintenance-intensive, the entire

fleet has approximately a 49 percent availability figure at any given point. Luckily, recent reports between Air Force Secretary Heather Wilson and Senator Marco Rubio have concluded that 69 percent of the F-22's at Tyndall were able to escape to safety, leaving behind the 31 per cent designated non-mission capable (NMC) to be sheltered in place.

The 31 percent figure would mean that 17 jets remained in Tyndall's hangars when Hurricane Michael made contact. The big concern then is how severe the damage was that was inflicted on them. Photos after the storm had passed show hangars with collapsed roofs as well as some that had buckled entirely. The distinctive silhouette of the F-22's are clearly visible within many of the shots. However, Air Force Secretary Wilson mentioned that "damage was less than we feared and preliminary indications are promising."

The damage caused to these seventeen jets could mean a potential loss of nearly 10 percent of the entire U.S. F-22 fleet. Given the very specific role that these jets fulfill and their already



United States Air Force under Fair Use

questionable availability figure, the loss could be incredibly significant. Talks has once again resumed about potentially restarting production of the F-22 to meet current demands, with countries such as Russia and China developing their new fifth generation

air superiority fighters. However, the economic reality is that an additional line of 75 aircraft would incur a roughly \$266 million average unit cost, which is no small price to pay

## New Developments in Carbon Tax Debacle Federal Government Announces its own Carbon Tax Plan

**KIRSTEN EHLERS**  
1A BIOMEDICAL

Those of you following provincial or federal politics will be painfully aware of the never-ending carbon tax debates.

Last Tuesday, Trudeau announced \$2 million in carbon tax rebates, as no one is happy.

Some provinces, including New Brunswick, Manitoba, Saskatchewan, and Ontario have refused to comply

with Ottawa's carbon tax, criticizing the negative impact it has on business. Trudeau had promised that non-compliant provinces would have a federally-imposed carbon tax and that's exactly what has happened.

Canadians in these four provinces will now be charged a \$20 tax per tonne of carbon to compensate for the lack of a provincial carbon tax. Trudeau has promised at least \$2 million in rebates to help lessen the burden of the carbon tax on Canadians in these four provinces. These rebates can be obtained when Canadians file their income taxes.

Opponents of the carbon tax, including Ontario Premier Doug Ford have called the government carbon tax plan "the most divisive, most regressive tax in Canadian history". It has also been criticized for being a cash grab.

Ottawa's view on the carbon tax is that is one of the means of achieving Canada's goals for Paris Agreement, but not the only way. Combined with investing in renewable energy and public transportation, the carbon tax aims to change the lifestyle of Canadians to

be more green.

The objective of the carbon tax is important. Climate change is a real problem that needs global effort to remedy. A carbon tax is an effective way for Canada to do their part in reducing greenhouse gas emissions. However, what are the ramifications of this federally imposed carbon tax? Tensions between the provinces and Ottawa are incredibly high. The Canadian oil industry is already declining and the carbon taxes may threaten the future of the industry. Are the positive effects on carbon emission worth the negative side effects that may impact Canada's competitiveness? emissions. However, what are the ramifications of this federally imposed carbon tax? Tensions between the provinces and Ottawa are incredibly high. The Canadian oil industry is already declining and the carbon taxes may threaten the future of the industry. Are the positive effects on carbon emission worth the negative side effects that may impact Canada's competitiveness?



Nathan Denetter/Canadian Press under Fair Use

**Canadian Minister of Environment Catherine McKenna answers questions about the federal carbon tax in this undated photo.**

# Coming Soon to a Classroom Near You....

## Course Critique Time is Approaching

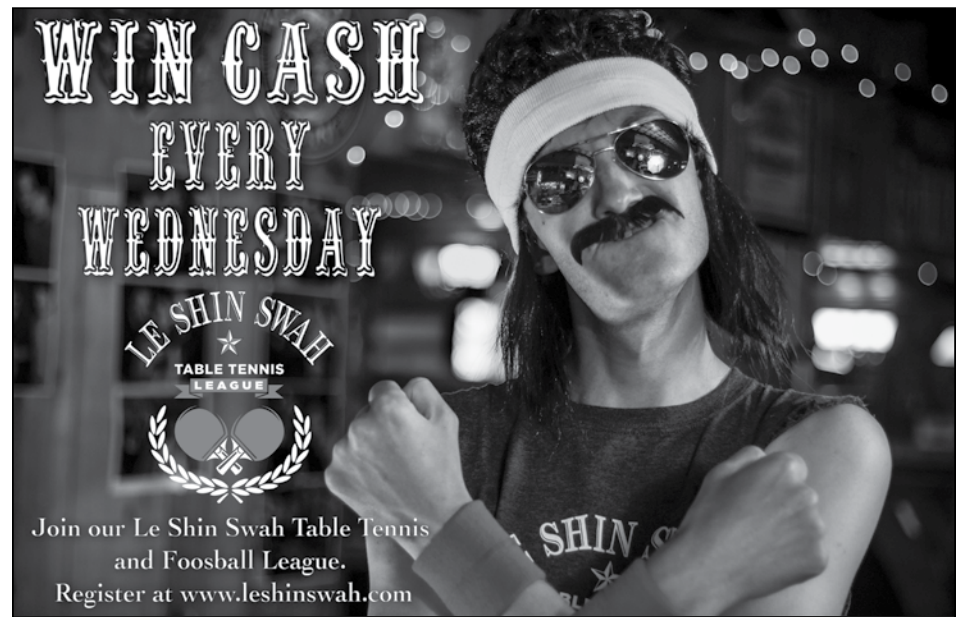
Hello there everyone! It's that time of the term: Course Critiques are almost here! Once again, they will be taking place on <https://evaluate.uwaterloo.ca> for the majority of the population. Electronic submission for Course Critiques is great because it helps save us over 22,000 sheets of paper each term. That's almost three trees per term! Saving the environment, hooray!

Beyond that, electronic critiques are excellent because they also give us an easy way to extract meaningful student feedback, filter out offensive responses, and help improve the quality of classes for everyone.

However, in order for this system to work, we need YOU to fill out your Course Critiques. Response rates have been gradually declining over the past several years, and low response rates mean that faculty members might not have the same confidence in the responses they get. Feedback is invaluable in all areas of academia and professional life, and

with your help we can make future students' lives even better.

Between November 12 and 23, your professors & instructors should give you class time to complete Course Critiques electronically. Make sure you find out from them when you'll be given class time so that you can bring your web-enabled phone, tablet or laptop to class and complete your Course Critiques. And please, complete all your Course Critiques this term!



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# Upcoming Events Calendar

Upcoming Events Calendar							
Wednesday October 31	Thursday November 1	Friday November 2	Saturday November 3	Sunday November 4	Monday November 5	Tuesday November 6	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>
Council Meeting #3	Winter Clothing Drive Starts  Isaac Engineering Networking 2 PM - 4 PM  PEO Panel 6:30 PM - 9:30 PM, RCH 307  Puppies in POETS 6:30 PM - 7:30 PM, POETS	Exam Bank Push			Engueuers 6:00 PM - 9:00 PM, POETS  Resume Critiques 6:30 PM - 8:30 PM	F*ck Up Forum 5:30 PM - 7:30 PM, POETS	
Wednesday November 7	Thursday November 8	Friday November 9	Saturday November 10	Sunday November 11	Monday November 12	Tuesday November 13	
Tie-Dye		Diversity in Engineering Conference  WEC	Diversity in Engineering Conference  WEC  Women in Engineering: What's Next and What's Now	Diversity in Engineering Conference  Dungeons & Dragons 12:00 PM - 3:00 PM, POETS	Engueuers 6:00 PM - 9:00 PM, POETS	RuPaul Drag Race Viewing Party 6:00 PM - 8:00 PM, POETS	

# The Iron Crossword

**NANCY HUI**  
CIVIL '15

1	2	3		4	5	6	7	8		9	10	11	12	13
14				15						16				
17				18						19				
20			21					22	23					
24						25					26	27	28	
29					30	31					32			
				33						34				
			35	36					37	38				
39	40						41							
42					43	44				45	46	47	48	
49				50						51				
			52					53	54					
55	56	57				58	59					60		
61						62						63		
64						65						66		

**ACROSS**

- 1 Retch
- 4 Hid under a rug
- 9 Leader of 8-down
- 14 Yours and mine
- 15 POETS has one!
- 16 Breaking of the fourth wall
- 17 No longer an amateur
- 18 Stress symptom
- 19 Camiknicker
- 20 Leader of 37-down
- 22 Forced to drink a Smirnoff cooler
- 24 Put up (e.g. a flagpole)
- 25 Wolf houses
- 26 Stock market device giving owner the right to sell an asset under specific conditions
- 29 Less done than medium
- 30 Wrong
- 32 Kitchener-Waterloo incumbent
- 33 European mountain range
- 34 Not a couch, not yet a bed
- 35 Having no party affiliation
- 39 Spanish or Filipino marinade
- 41 The first man
- 42 What YOU'RE going to do on June 12th, 2014!

**DOWN**

- 1 Burrowing rodent
- 2 Northern lights
- 3 Not a shower, perhaps
- 4 A sudden gush
- 5 Protagonist of Breaking Bad
- 6 Decorate with acid!
- 7 March 14th pastry
- 8 They'd like to abolish the Ontario Power Authority and the Green Energy Act, expand opportunities for people with disabilities, cancel the 30% tuition grant, scrap LRT projects for subways, and reduce public service employment through attrition
- 9 Despises
- 10 Utilized
- 11 Had sex with
- 12 Sum
- 13 It's good for doors
- 21 E.g. Billy Bishop
- 23 Brain and spine (abbr.)
- 25 Typhus or cholera
- 26 Jolie's hubby
- 27 Potentially an alien craft (abbr.)
- 28 What you can hang at the sea
- 30 Top-fermented beer
- 31 The positions up for grab this election
- 32 "Some Nights" band
- 33 Brouhaha
- 34 \_\_\_Shep, the XX chromosomal counterpart to BroShep
- 35 Whit
- 36 No Better Enigma
- 37 They'd like to implement a tax credit for employers to hire new employees, support LRT (like 53-across), introduce a tax credit for caregivers supporting ill or elderly family members, and remove sales taxes from energy bills.
- 38 Currently from 6AM to 9PM
- 39 \_\_\_ Maria
- 40 What you do to i's
- 43 Court
- 44 Inborn
- 45 What you do to cheese and wine
- 46 It holds power tools and thousand pound death machines
- 47 Symptom: involuntary lack of muscular coordination
- 48 Let up
- 50 Currently the 4th biggest party. They don't have any seats.
- 51 An immeasurable chasm
- 52 Peruvian empire
- 53 Glee city
- 54 A confirmed couple
- 55 Stenographer's stat
- 56 Aw yiss
- 57 Quite the opposite of 56-down
- 59 Stir

# Sudoku

#2018-13

**RAFIQ HABIB**  
EDITOR-IN-CHIEF

'Tis but a Scratch

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

An Arrow to the Knee

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

Et tu, Brute?

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

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**  
Stone He - 2A Mechanical

*"You have 10 minutes left..."*



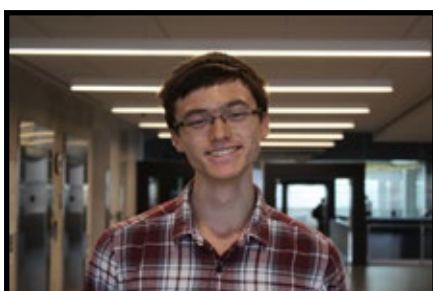
*"I swear he said 30 minutes 5 minutes ago."*  
Eric Fu, 1A Mechatronics



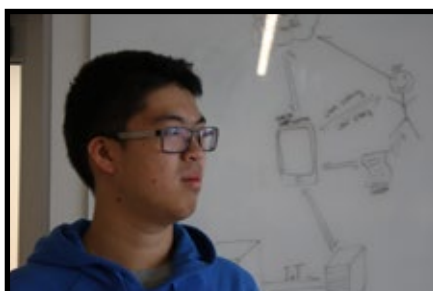
*"Start Running."*  
Krishn Kiran Ray, 1A Mechatronics



*"Panic! at the Disco-aaaaaaaaa(pause)"*  
Delaney Lindstorm-Humphries, 2A Mechanical



*"Double down and get as much done as possible."*  
Jordan Kool, 1A Civil



*"...to eat lunch and get to class."*  
Jesse Ren, 1A Environmental



*"It's the 4 minute song twice plus a half."*  
Faye Zhang, 4A Mechatronics