# OMUN V

**DISEC**

# Disarmament and International Security Committee

# Letter from the Chair

Dear Delegates,

Welcome to DISEC at OMUN V!

My name is Jordan Van Slingerland, and along with my co-chair Nick Reszetnik and our vice-chair Matt Wong, we are honored to be your DIAS for OMUN V.

To kick things off, I'm a tenth-grade student at UCC, and am originally a New Yorker and a proud Canadian-American. I have deep interests in everything from the automotive sector to basketball and as is common with most MUN chairs, politics. In my spare time, I like to race cars, fly planes, shoot hoops, play video games, travel, and volunteer. I've been lucky to have had the opportunity to travel everywhere from Central America to warzones (sadly, quite literally) in the Middle East, so, I can speak firsthand in saying that the topics that we'll be discussing are very pressing in our modern world. My love for MUN is long-standing, I've been doing it now for nearly 4 years, and have had the great opportunity to attend conferences like SSUNS, HMUN, BMUN, UTMUN, and NAIMUN just to name a few.

Nick is also a tenth-grade student at UCC, and is originally from New Jersey. This is his third year participating in Model UN and he has thoroughly enjoyed the experience of travelling to international and domestic conferences such as SSUNS, HMUN and NAIMUN. He has represented countries from all over the world and debated numerous topics similar to those we will be discussing in committee. He too looks forward to seeing all of you debate and address the pressing topics at hand, and develop innovative solutions to solve these issues.

Like Nick and myself, Matt is also in tenth-grade here at UCC, and is originally from Shanghai, China. Matt got involved with the Model UN program two years ago and truly enjoyed every second he spent with the program. He has had the opportunity to represent different countries in international and local conferences such as SSUNS, BMUN and UTMUN. Outside of school, he's extremely passionate about sports: basketball, soccer,volleyball (just to name a few). He strongly encourages delegates to collaborate and approach a problem from multiple perspectives and ultimately produce comprehensive solutions that benefits humanity as a whole.

Everyone on the DIAS has been in your shoes before, having all been delegates at OMUN ourselves, so feel free to come to us at any point during the conference with any questions or comments you might have. These two topics are becoming extremely pressing in our modern world, especially with the rise in tensions between nations on all corners of the globe.

That being said, we look forward to seeing you all in committee! Please don't hesitate to reach out to us via email with any questions.

Sincerely,
The DIAS

# Topic A:
## Nuclear Proliferation

### Introduction:

Nuclear Proliferation is a broad term that describes the spread of nuclear weapons and weapons-applicable information(USL). The two atomic bombs deployed in Hiroshima and Nagasaki during the second world war first shed light to the consequences of Nuclear weapons, where thousands of people were ruthlessly killed and left unimaginable repercussions to the world. During the cold war, we witnessed how nuclear weapons, if politicized, can create a dangerous dynamic in the world. There was an exponential increase in nuclear weapons production and stockpiling during the "Nuclear Arm-Race Phase" where countries are trying to assert their political dominance and increase their bargaining power by obtaining nuclear weapons. Currently, there are 9 countries that possess nuclear weapons and this makes non-nuclear power extremely vulnerable to nuclear offences. Historian Mitchell Macgonell describes the 21st century as "apocalyptic" and attributes this to the recent development of ICBMs(Intercontinental Ballistic Missiles). The ICBMs pose a concerning threat to humanity as it can result in beyond-comprehension damage to countries. A comparison nuclear scientists like to make is that the nuclear bomb deployed in Nagasaki had an explosive yield of15 kilotons of TNTs and an ICBMs will have an explosive yield of approximately 250 kilotons of TNTs.

### Past UN actions:

In 1946, the general assembly established the Atomic Energy Commission to regulate the uses of nuclear materials and aims to eliminate all weapons of mass destruction. Most notably, the Truman Administration proposes the Baruch Plan where it demands that all stockpiles of nuclear weapons will be eliminated but unfortunately this got vetoed by the Soviet Union. The IAEA(International Atomic Energy Agency) was set up by the United Nations in 1957 to facilitate peaceful uses of nuclear power. Its role is also the administration of safeguards arrangements, which assures the international community that countries are abiding to treaties. They conduct regular inspections of civil nuclear facilities and demand full transparency with countries' nuclear activities. Safeguards are designed to reduce risk by early detection and the Safeguards are backed up by the threat of international sanctions.

The Non-Proliferation Treaty was signed by 191 countries, 5 nuclear countries included, in 1968. This treaty elaborates on UN's previous efforts in hindering Nuclear Proliferation and outlines specific steps and actions to ensure all nuclear materials are only used in an appropriate and peaceful manner. It's important to highlight that the NPT is the only legally-binding nuclear disarmament treaty ratified by the UN and its almost universal membership(With the exception of South Sudan, India, Pakistan and Israel) made this treaty the cornerstone for nuclear non-proliferation and nuclear disarmament .

### Nuclear-Weapon-Free-Zones

Nuclear-Weapon-Free-Zones (NWFZ) was established to strengthen global nuclear non-proliferation and unite international efforts towards peace and security.

General Assembly resolution 3472 B (1975) defines a Nuclear-Weapon-Free Zone as "any zone recognized as such by the General Assembly of the United Nations, which any group of States, in the free exercises of their sovereignty, has established by virtue of a treaty or convention whereby:

a. The statute of total absence of nuclear weapons, to which the zone shall be subject, including the procedure for the delimitation of the zone, is defined
b. An international system of verification and control is established to guarantee compliance with the obligations deriving from that statute" (UNODA 1975).

### Nuclear Power:

Despite the aforementioned disadvantages of nuclear proliferation, appropriate use of nuclear materials could make significant contributions to humanity. Nuclear power plants function by triggering the "chain reaction of Uranium-235" where the uranium undergoes the process "of splitting neutrons in halves". Then the enormous amount of heat  generated from the nuclear fission will heat up the surrounding water and evaporate into steam. Subsequently, the steam will turn the turbine and produce electricity. It's estimated that one kilogram of Uranium-235 will generate 20 terajoules of electricity which is equivalent to the amount of energy generated from 1.5 million kilogram of coal. The IAEA estimates that approximately 10% of the world's electricity is generated from the 450 nuclear power plants in the world. Furthermore, amidst the imminent threats of climate change, nuclear power is a much more environmentally friendly energy source. For every KWh of electricity produced, a mere 3.3 grams of Carbon Dioxide is produced and most of the carbon dioxide originates from the Uranium mining and milling process, not from the actual nuclear power plant itself. Here comes the dilemma that the chair encourages all delegates to consider: "Should DISEC suspend Uranium extractions because of the potential militarization of uranium? Or should DISEC encourage them to extract uranium because of the benefits of nuclear energy?".

### Case Study:

North Korea made weapons-grade plutonium using a research reactor and a reprocessing plant in defiance of its NPT obligations. In 2006, 2009 and February 2013 it exploded nuclear devices.

The Democratic People's Republic of Korea (DPRK) is an example of the success of safeguards in their goal to detect violations of non-proliferation obligations. It was brought to the attention of the international community, with diplomatic pressure being applied through the UN Security Council.

The DPRK signed the NPT in 1985. However, it delayed concluding its NPT Safeguards Agreement with the IAEA. This delay was apparently related to the presence of US tactical nuclear weapons in South Korea, which were withdrawn in 1992. IAEA inspections then showed some problems.

### Plutonium Programme

In 1985 the DPRK brought two large "experimental power reactors" into operation; this showed characteristics of a plutonium production reactor for destructive use. It also built a reprocessing plant the could produce the uranium cores needed weapons, which IAEA inspectors discovered. IAEA inspectors found discrepancies, which indicated that the reprocessing plant had been used more often than the DPRK had declared. This suggested that the DPRK could have weapons-grade plutonium, which it had not confirmed to the IAEA.

IAEA called on the DPRK to allow special inspections of the two sites so that the stocks of nuclear material could be verified, which the DPRK refused, and soon announced its intention to withdraw from the NPT. In April 1993 the IAEA Board concluded that the DPRK was in non-compliance with its safeguards obligations and reported the matter to the UN Security Council. In June 1993 the DPRK announced that it had "suspended" its withdrawal from the NPT, but subsequently claimed a "special status" with respect to its safeguards obligations. This was rejected by IAEA.

Once the DPRK's non-compliance had been reported to the UN Security Council, the vital part of the IAEA's mission had been completed. Inspections continued, although inspectors were hampered in what they were allowed to do by the DPRK's claim of a "special status."

After negotiations between USA and DPRK, the IAEA was given additional duties, to monitor the freeze on operation and construction of DPRK's production reactors, until they were eventually demolished. The DPRK remained uncooperative with the IAEA verification work and did not comply with its safeguards agreement.

Ultimately, the DPRK was persuaded to end its nuclear weapons program in the 1990s in exchange for billions of dollars in energy-related assistance (World Nuclear Association 2015).

### Questions to Consider:

1. Is your country currently in possession of nuclear weapons? If not, is it trying to be?
2. For what purpose does your country possess nuclear weapons (if it does)?
3. The Mutually Assured Destruction is a popular theory that states that countries will not attack each other due to the fear of annihilation. Do you support this theory? Why or why not?
4. Consider the pros and cons of Uranium Extraction, do you think it's justified?
5. How are your country's relations with nuclear nations?
6. How might nuclear proliferation change a country's relationship with one and another?

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# Topic B:

## Lethal Autonomous Weapons Systems

**Artificial Intelligence and Automated Weaponry**

**Introduction**

Artificial intelligence (AI) is a broad term that encompasses the computer and statistical systems that perform actions that usually require a form of intelligence that previously only humans were capable of. Artificial intelligence is already changing the way that the world operates today, whether it is a website that tailors advertisements for a specific user or a self-driving car. As with many emerging technologies, however, AI has large implications for the future of warfare, potentially warranting a response from the First Committee.

AI is found in many places in the world today, whether it is Siri, Apple's personal voice assistant on its devices, or IBM's Watson, an advanced AI that helps people and organizations integrate machine learning, a branch of computer science that deals with systems that automatically learn and adjust. In some tasks, artificial intelligence has gained abilities that surpass what humans are thought to be able to achieve, for example in the field of data analytics. Machine learning enables systems to analyze data and recognize patterns faster than ever thought possible, and more accurately.

The practical applications of artificial intelligence are often misunderstood. It is extremely unlikely that the world will see anything similar to James Cameron's *Terminator* anytime soon, if this is even possible with current technological capabilities. There is however, the potential for machines that could learn to recognize individuals with particular physical characteristics or clothing styles. Furthermore, machines such as aircraft armoured vehicles could be programmed to operate autonomously - without human assistance.



*Figure 3: BAE Systems prototype Corax UAV*

Developed countries such as the United States are already developing programs that will help them wage war remotely. The US Department of Defense has closed bidding for a contract worth $10 billion, called the Joint Enterprise Defense Infrastructure (JEDI).[21] The program hopes to take steps toward weaponizing AI, and signs show that there are more likely similar contracts to come as the industry expands. The First Committee's task is to help regulate the creation and use of such technologies. The following sections will focus on some prospects for the use of autonomous weaponry and the application of artificial intelligence in warfare.

## Autonomous Aircraft

Autonomous aircraft widely refers to flying devices that can operate with human direction. One of the primary types of craft in this field are drones, which have been able to follow and film targets for many years at this point. Autonomous and semi-autonomous drones. The United States has used autonomous drones to carry out airstrikes against target against targets in the Middle East, and, as of September 2018, has announced to implement a new covert campaign to target Islamic State (ISIL) militants in north-eastern Niger. Furthermore, the CIA, as opposed to solely the military, is poised to take on a greater role in facilitating these attacks, adding a new dimension; not only military groups will possess these capabilities.

Unmanned planes have also presented themselves in the form of spy planes, ultralight aircraft originally developed by the Israeli Air Force that could remain at the same altitude for hours on end.[22] These remotely piloted aircraft, often called unmanned aerial vehicles (UAVs), have the potential to save lives in combat, and their development is pursued by several highly-developed militaries, including those of the United States, Israel, and the United Kingdom.

There are arguments for both sides of the debate on whether or not such weapons have a net positive or negative impact. Countries in possession are easier to carry out, more effective, and are less costly both fiscally and in terms of lives. This being taken into consideration, there is an ethical dilemma with such weapons. They often make it harder to distinguish between civilian and military targets, causing innocent lives to be lost in the crossfire. It is estimated that thousands have been killed in Syria by U.S. airstrikes since early 2017.[23] Delegates will need to consider carefully how to balance the interests of their country when considering policy decisions.

## Semi-Autonomous Arms

Autonomous arms are another class of weaponry that is used to make military duties less difficult, although they present significant challenges to the international community. While no fully autonomous capable of eliminating targets currently exist, semi-autonomous systems are already in operation.

The most prevalent example is the Samsung SGR A-1 sentry gun, used to assist South Korean troops in monitoring the border along the demilitarized zone with North Korea. The turret is armed with a camera, machine gun, microphone, capable of voice recognition. At present, the device is not authorized to fire automatically, although it does possess these capabilities at this time. The device is capable of issuing verbal warnings and recognizing actions of surrender such as the lowering of weapons before firing. Nations such as Israel have employed autonomous jeeps that patrol their border.[24] This is evidence that the technology already exists, and scientists at the Group of Governmental Experts (GGE) urges the UN to create a more formal treaty governing such technologies.

Controversy shrouds these technologies. The North Korean army has roughly 1 million soldiers near the demilitarized zone, while the South Korean army has approximately half the number of personnel. The Samsung SGR A-1 allows South Korea to keep its borders secure despite these odds. Technologists at Samsung believe that soon, the technologies will allow South Korea to remove its mandate on 2-year military conscription for all citizens. While some parties argue that these technologies therefore reduce human casualties and make combat cheaper, others contend that it makes encourages aggression by the same token. Delegates must consider both sides of the argument and what type of regulation, if any at all, would be most advantageous for their country.

### The Private Sector

This relatively new industry is clearly trending toward the use of government-issued contracts to the private sector rather than public military development. Military AI often requires powerful cloud technologies to sustain itself, which is largely provided by companies such as Amazon, IBM, Microsoft, and Google. Google has signed on to a military contract with the United States to develop Project Maven, a technology that could allow the United States Department of Defense to track the movements of individuals. Under much scrutiny, Google said that it would not renew its contract for Project Maven in June 2018, and dropped a $10 billion military contract bid in October 2018. Many employees signed a petition at Google urging leadership to commit to not using its technologies for warfare, but its sudden absence in bidding in no way changes the landscape. Amazon, which has always been the frontrunner to win the contract, continues to pursue related technologies. There are many other instances of the private sector in the AI and automated weaponry industry, and this is just one example of where public scrutiny convinced a company to take a course of action. Delegates are strongly encouraged to familiarize themselves with these instances in order to develop consistent, effective, and comprehensive policy in the committee.

### Guiding Questions

The examples provided above are just a few examples of the use of AI and automated weaponry. Below are guiding questions to help delegates to conduct research.

1. What steps can DISEC take to manage the users manage the creation and use of AI and automated weaponry?
2. What steps can DISEC take to regulate automated aircraft and semi-autonomous arms?
3. What stance should the First Committee take on the involvement of the private sector in the development of military technologies?
4. How do the issues at hand relate to your country specifically? What is your country's foreign and domestic policy on AI and automated weaponry?

This concludes the background guide. Please remember that this is just a brief overview of the topics facing DISEC, and delegates are strongly encouraged to conduct their own research when formulating their position papers. Position papers should be a maximum of two pages per topic in Arial or Times New Roman 12pt font. Again, have to be submitted to disec@omun.ca on April 1st 2020, and should be titled "Country_Name", (e.g.: UnitedStatesofAmerica_HarryPatel) in Microsoft Word Document or PDF format. With that, I hope you enjoy your journey at OMUN V - best of luck.

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