



Introduction

Briefing for DoD Community of Interest on Intelligence Autonomous Systems

Law of War

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Overview

- ❑ Introduction to the Law of War
- ❑ DoD Law of War Program
- ❑ Law of War and Artificial Intelligence and
Autonomy in Weapon Systems



What is the Law of War?

- A body of international law specially adapted to war. International law includes:
 - Treaties the United States has accepted; and
 - Customary international law.
- Governing resort to force – *jus ad bellum*
- Regulating conduct of hostilities – *jus in bello*:
 - International armed conflicts – conflicts between opposing States; and
 - Non-international armed conflicts – other conflicts, such as military operations against terrorist groups.



Law of War Principles

- ❑ Serve as the foundation of the law of war and may be used to interpret specific provisions of law.
- 1. Military necessity - justifies the use of all measures needed to defeat the enemy as quickly and efficiently as possible that are not prohibited by the law of war.
- 2. Humanity - forbids the infliction of suffering, injury, or destruction unnecessary to accomplish a legitimate military purpose.
- 3. Proportionality - even where one is justified in acting, one must not act in a way that is unreasonable or excessive.
- 4. Distinction/Discrimination - obliges parties to a conflict to distinguish principally between the armed forces and the civilian population, and between unprotected and protected objects.
- 5. Honor - demands a certain amount of fairness in offense and defense and a certain mutual respect between opposing military forces.



Military Necessity and Humanity

DoD

“Nations have developed the law of war to be fundamentally consistent with the military doctrines that are the basis for effective combat operations. For example, the self-control needed to refrain from violations of the law of war under the stresses of combat is the same good order and discipline necessary to operate cohesively and victoriously in battle. Similarly, the law of war’s prohibitions on torture and unnecessary destruction are consistent with the practical insight that such actions ultimately frustrate rather than accomplish the mission.” GC Preston, Foreword, DoD Law of War Manual, 2015

“[T]he law of war isn’t a compromise between humanity and military necessity. Instead, the two principles are fundamentally consistent with one another. ... If the law of war is not meant to blunt the sword, but to sharpen it, then strengthening the law of war and promoting humanitarian interests on the battlefield can occur when our operations become more efficient, precise, and effective.” GC Ney, Remarks May 2019.

Other Perspectives

“The primary purpose of international humanitarian law (IHL) is to protect the victims of armed conflict and to regulate the conduct of hostilities based on a balance between military necessity and humanity. Keeping that balance is a difficult and delicate task, particularly in contemporary armed conflicts marked by a continued blurring of the traditional distinctions and categories upon which the normative edifice of IHL has been built and upon which its functionality depends in operational practice.” Nils Melzer, 2010.

“IHL is a compromise between two underlying principles, of humanity and of military necessity. These two principles shape all its rules.” International Committee of the Red Cross (ICRC), What is IHL?, Sept. 2015



Examples of Law of War Rules

- ❑ Prohibition on targeting civilians and civilian objects for attacks
- ❑ Prohibition on targeting enemy combatants placed *hors de combat*
- ❑ Rules for the humane treatment of detainees and POW camps
- ❑ Protections for cultural property



Law of War and the U.S. Armed Forces

“The law of war is part of who we are.”



THE WRITINGS OF
[179]

For your information respecting the officers, who are prisoners in our possession, I have ordered the commissary of prisoners to furnish you with a list of them. It will be forwarded with this. I need not mention to you, that every possible tenderness, that is consistent with the security of him, should be shown to the person whose unfortunate lot it may be to suffer. I am, dear Sir, &c.

TO LIEUTENANT-GENERAL JAMES SCHEMONT.
[180]

Sir,
I had the honor to receive your letter of the 28th instant. Your Excellency is acquainted with the determination expressed in my letter of the 1st of April to Sir Henry Clinton. I have now to inform you, that, on the 10th of May, from that resolution, orders are given to designate a British officer for retaliation. The time and place are fixed; but I still hope the result of your court-martial will prevent this dreadful alternative.

Sincerely lamenting the cruel necessity, which alone can induce us to determine a measure in the present instance, I do assure your Excellency, I am as earnestly desirous as you can be, that the war may be carried on agreeable to the rules, which humanity forbids, and the example of the polished nations.

“The words that precede the names of those who have been or may be taken as captives, and at length the King general has promised to show to France, and to the world, the same tenderness, which he has shown to the British, and to the world, in the present instance.”

[181] GEORGE WASHINGTON


recommend, and shall be extremely happy in agreeing with you to prevent or punish every breach of the rules of war within the sphere of our respective commands.

I am unacquainted with the circumstances of the detention of Badgley and Hatfield. The matter shall be examined into and justice done; but I must inform you, that in my opinion deserters, or characters, who for crimes they have committed are amenable to the civil power, cannot on either side be protected under the sanction of a flag. I do not pretend to say, the desertionists persons are in that predicament.

Retaliation would be useless. I forbear, therefore, to mention numerous instances, which have taken place of this war with unusual severity, and disgraced the honor of humane nature itself. What I have this moment said, I repeat the assertion, that it is my most ardent desire, not only to reduce the inevitable calamities of war, but even to introduce on every occasion an equal share of tenderness and humanity as can possibly be exercised in a state of hostility.

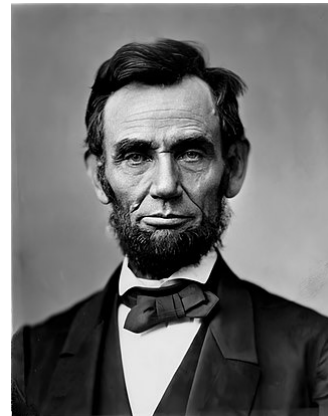
I have the honor to be, Sir,
Your obedient servant,
G. Washington

DEPARTMENT OF DEFENSE
LAW OF WAR MANUAL



JUNE 2015
(Updated December 2016)

OFFICE OF GENERAL COUNSEL
DEPARTMENT OF DEFENSE



General Orders, }
No. 100. } **WAR DEPT., ADJUTANT GENERAL'S OFFICE**
Washington, April 24, 1863.

The following "Instructions for the Government of Armies of the United States in the Field," prepared by Francis Leibler, LL. D., and revised by a Board of Officers, of which Major General E. A. Hitchcock is president, having been approved by the President of the United States, he commands that they be published for the information of all concerned.

By ORDER OF THE SECRETARY OF WAR:
E. D. TOWNSEND, Assistant Adjutant General.

INSTRUCTIONS FOR THE GOVERNMENT OF ARMIES OF THE UNITED STATES IN THE FIELD.

Martial law—Military jurisdiction—Military necessity—Retaliation.

1. A place, district, or country occupied by an enemy stands, in consequence of the occupation, under the Martial Law of the invading or occupying army, whether any proclamation declaring Martial Law, or any public warning to the inhabitants, has been



DoD Law of War Program

- ❑ DoD Directive 2311.01, the DoD Law of War Program, provides DoD policy:
 - “Members of the DoD Components comply with the law of war during all armed conflicts, however such conflicts are characterized.”
 - “The intended acquisition, procurement, or modification of weapons or weapon systems is reviewed for consistency with the law of war.”
 - “The DoD Components implement effective programs to prevent violations of the law of war, including: ...”



DoD DIRECTIVE 2311.01 DoD LAW OF WAR PROGRAM

Originating Component: Office of the General Counsel of the Department of Defense

Effective: July 2, 2020

Releasability: Cleared for public release. Available on the Directives Division Website at <https://www.esd.whs.mil/DD/>.

Reissues: DoD Directive 2311.01E, “DoD Law of War Program,” May 6, 2006

Approved by: David L. Norquist, Deputy Secretary of Defense

Purpose: This issuance:

- Establishes policy and assigns responsibilities for the DoD Law of War Program.
- Establishes the DoD Law of War Working Group to advise the General Counsel of the Department of Defense (GC DoD) on law of war matters to develop and coordinate on law of war initiatives and issues.



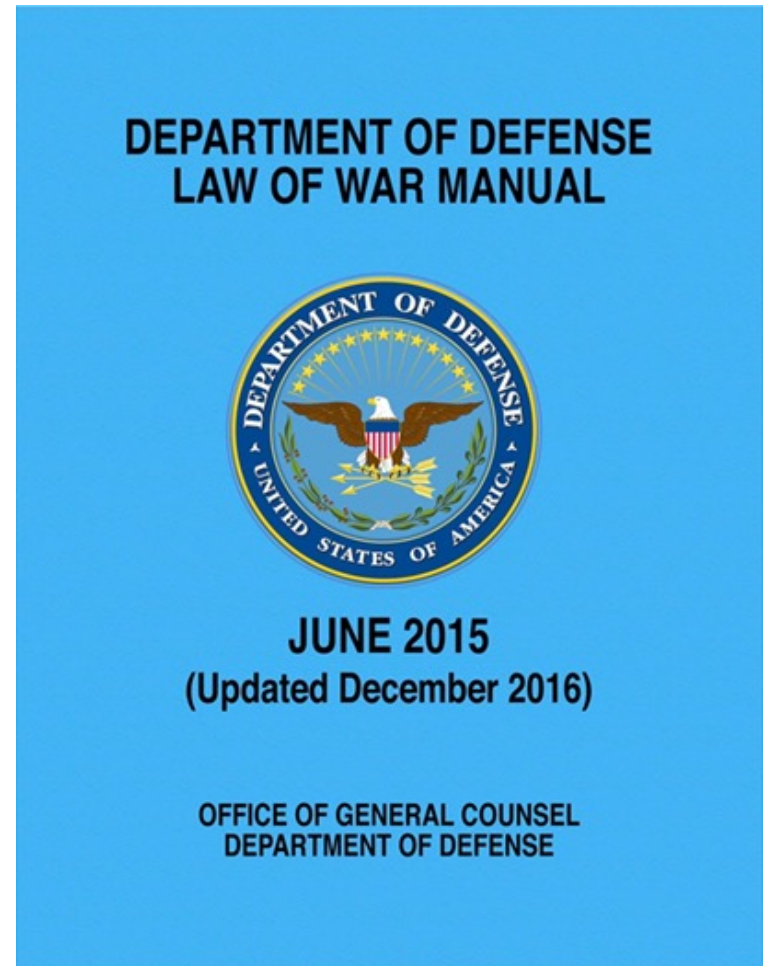
DoD Law of War Program

1. Law of war dissemination and periodic training;
2. Qualified legal advisers advising on the law of war;
3. Instructions, regulations, and procedures to implement law of war standards and establish processes for ensuring compliance;
4. Reporting of incidents involving potential violations;
5. Assessments, investigations, inquiries, or other reviews of incidents; and
6. Appropriate corrective actions.



DoD Law of War Manual

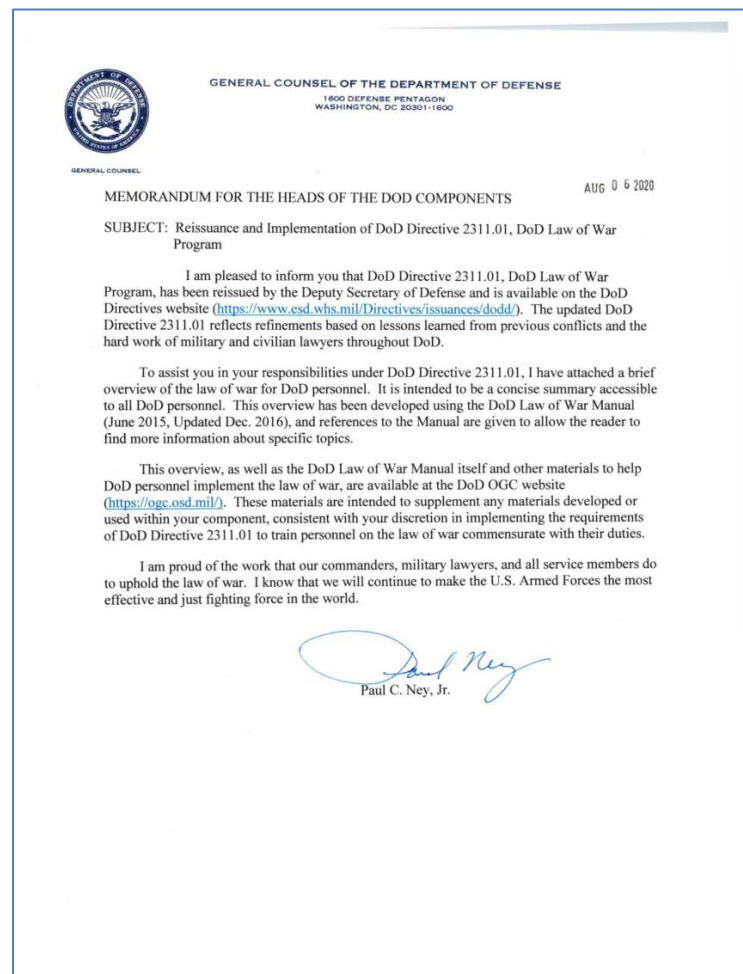
- ❑ Under DoD Directive 2311.01, “serves as the authoritative statement on the law of war within the DoD”
- ❑ Available defense.gov and DoD OGC websites.
- ❑ More than 1200 pages addressing a range of topics including the conduct of hostilities, cyber operations, air and space warfare, detention operations, and weapons.





DoD General Counsel Memo of August 6, 2020

- ❑ Provides a brief, 12-page overview of the law of war
- ❑ Assists DoD components in fulfilling the requirements of DoD Directive 2311.01
- ❑ Available on the DoD OGC website at:
https://ogc.osd.mil/LoW_Practice.html





Law of War and New Technologies

- ❑ “[T]he mere fact that a weapon is novel or employs new technology does not mean that the weapon is illegal.” DoD Law of War Manual § 6.2.1.
- ❑ “The law of war affirmatively anticipates technological innovation and contemplates that its existing rules will apply to such innovation” DoD Law of War Manual § 16.2.1.
- ❑ “When no specific rule applies, the principles of the law of war form the general guide for conduct during war.” DoD Law of War Manual § 2.1.2.2.
- ❑ New technologies can improve implementation of the law of war, such as protections for civilians.



Law of War and Autonomy in Weapon Systems

- ❑ “Although no law of war rule specifically restricts the use of autonomy in weapon systems, other rules may apply to weapons with autonomous functions.”
- ❑ “The law of war rules on conducting attacks (such as the rules relating to discrimination and proportionality) impose obligations on persons. ... Thus, it is not the case that the law of war requires that a weapon determine whether its target is a military objective. ... Rather, it is persons who must comply with the law of war.”
- ❑ “[T]he obligation on the person using the weapon to take feasible precautions in order to reduce the risk of civilian casualties may be more significant when the person uses weapon systems with more sophisticated autonomous functions.”

[DoD Law of War Manual § 6.5.9 \(Autonomy in Weapon Systems\)](#)



Law of War Principles and New Technology

- Does military necessity justify developing or using this new technology?
- Under the principle of humanity, does the use of this new technology reduce unnecessary suffering?
- Are there ways this new technology can enhance the ability to distinguish between civilians and combatants?
- Under the principle of proportionality, has sufficient care been taken to avoid creating unreasonable or excessive incidental effects?
- Under the principle of the honor, does the use of this technology respect and avoid undermining the existing law of war rules?



U.S. Working Paper: Humanitarian Benefits of Emerging Technologies in the Area of LAWS

CCW/2015/10/15/16/17/18/19/20

Group of Governmental Experts of the High Contracting Parties to the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects

1 April 2015

English only

Geneva, 9-13 April 2015 (first week)
Item 2 of the provisional agenda
Other matters

Humanitarian benefits of emerging technologies in the area of lethal autonomous weapon systems

Submitted by the United States of America

1. Introduction

Using Emerging Technologies to Limit Civilian Casualties Poses an Important Humanitarian Challenge

1. This working paper draws from existing State practice to identify potential humanitarian benefits of emerging technologies in the area of lethal autonomous weapon systems.
2. Civilian casualties are a tragic part of war. Although civilian casualties do not necessarily reflect a violation of international humanitarian law (IHL), preventing civilian loss represents suffering in one of the most poignant of IHL. Reducing civilian casualties promotes the objectives and purposes of the CCW, whose preamble recalls the "general principle of the protection of the civilian population against the effects of hostilities."
3. Emerging autonomy-related technologies, such as artificial intelligence (AI) and machine learning, have considerable potential to improve the quality of human life with applications such as disaster relief and artificial assistance. The use of autonomy-related technologies can even save lives, for example, by improving the accuracy of medical diagnoses and surgical procedures or by reducing the risk of car accidents.¹ Similarly, the potential for these technologies to save lives in armed conflict increases their consideration.
4. In particular, the United States believes the discussion of the possible options for addressing the humanitarian and international security challenges posed by emerging technologies in the area of lethal autonomous weapon systems in the context of the objectives and purposes of the Convention merit serious consideration, of how these technologies can be used to enhance the protection of the civilian population against the effects of hostilities.

¹ <http://reporterlab.com/2017/01/20/the-drones-in-the-sky-are-also-saving-lives-in-healthcare/>; <http://reporterlab.com/wp-content/uploads/2017/01/2017-01-20-reporterlab-ai-in-healthcare.pdf>; <http://reporterlab.com/wp-content/uploads/2017/01/2017-01-20-reporterlab-ai-in-healthcare.pdf>; <http://reporterlab.com/wp-content/uploads/2017/01/2017-01-20-reporterlab-ai-in-healthcare.pdf>



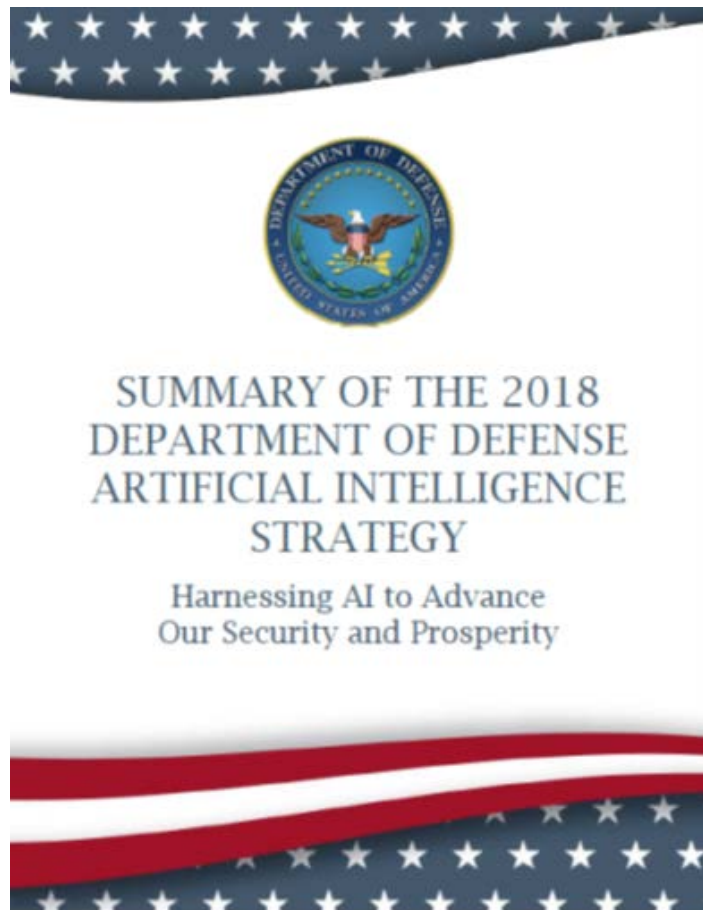
Please recycle



“Existing State practice provides many examples of ways in which emerging technologies in the area of lethal autonomous weapons systems could be used to reduce risks to civilians: (1) incorporating autonomous self-destruct, self-deactivation, or self-neutralization mechanisms; (2) increasing awareness of civilians and civilian objects on the battlefield; (3) improving assessments of the likely effects of military operations; (4) automating target identification, tracking, selection, and engagement; and (5) reducing the need for immediate fires in self-defense.”



DoD Strategy on Artificial Intelligence (AI)



Leading in military ethics and AI Safety

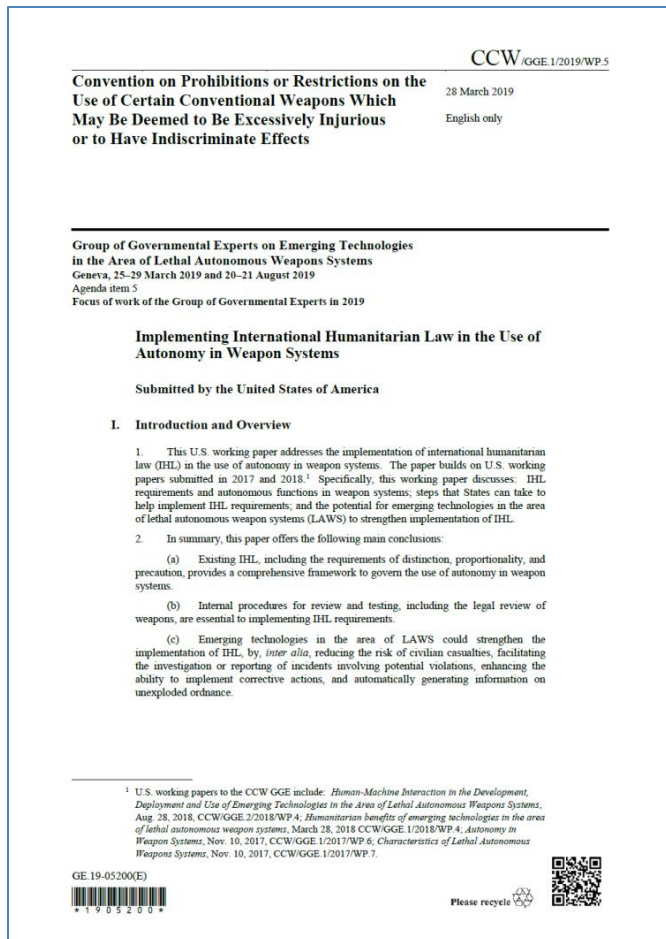
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“Using AI to reduce the risks of civilian casualties and other collateral damage. We will seek opportunities to use AI to enhance our implementation of the Law of War. AI systems can provide commanders more tools to protect non-combatants via increased situational awareness and enhanced decision support.”



U.S. Working Paper: Implementing IHL in the Use of Autonomy in Weapon Systems

- ❑ Discusses “three general scenarios for the use of autonomous functions in weapon systems”
- ❑ Discusses IHL “requirements of distinction, proportionality, and precaution”





Semi-Autonomous Weapons

- “First, a weapon system’s autonomous function could be used to effectuate more accurately and reliably a commander or operator’s intent to strike a specific target or a specific target group. For example, the operator identifies an enemy surface-to-air missile system and fires a missile at it. Rather than only being guided by the operator’s aiming of the missile at the target, the missile also has sensors and computers that provide it the capability to recognize enemy surface-to-air missile systems (e.g., through detection of electromagnetic emissions of the enemy surface-to-air missile system and comparison with an onboard “library” of such emission “signatures”), and, after being fired, the missile automatically identifies, acquires, and guides itself to the target that the operator intended to strike.”





Using Machines to Aid Decision-Making

- ❑ “Second, a weapon system’s autonomous functions could inform a commander or operator’s decision-making about what targets he or she intends to strike. ... For example, counter-battery radar systems are used to identify the location from which incoming rockets, artillery, and mortars were launched, which is used to direct counter-battery fire by an artillery system.”





Autonomous Weapons Systems

- ❑ “Third, a weapon system’s autonomous function could be used by a commander or operator to select and engage specific targets that the commander or operator did not know of when he or she activated the weapon system. For example, a commander might assess that there is a general risk of enemy missile or rocket attacks against a given location or against a given unit or platform, but the commander might not know of a specific incoming missile or rocket attack. In order to protect that location, unit, or platform, the commander might direct the activation of a weapon system, such as an active protection system, that would select and engage incoming projectiles automatically if such an attack occurs.”





International Discussions on Lethal Autonomous Weapons Systems

- Convention on Certain Convention Weapons (CCW) Group of Governmental Experts (GGE) meetings on emerging technologies in the area of lethal autonomous weapons systems (LAWS)
 - Meetings in Geneva include more than 100 interested States, NGOs, and International Organizations.
 - Meetings held from 2017 - 2020, and are planned for 2021.
 - US has participated actively in the meetings with large interagency delegations and working papers.



U.S. Working Papers for the CCW GGE

- ❑ Autonomy in Weapon Systems, Nov. 10, 2017, [CCW/GGE.1/2017/WP.6](#)
- ❑ Characteristics of Lethal Autonomous Weapons Systems, Nov. 10, 2017, [CCW/GGE.1/2017/WP.7](#)
- ❑ Humanitarian Benefits of Emerging Technologies in the Area of Lethal Autonomous Weapons Systems, March 28, 2018, [CCW/GGE.1/2018/WP.4](#)
- ❑ Human-Machine Interaction in the Development, Deployment and Use of Emerging Technologies in the Area of Lethal Autonomous Weapons Systems, Aug. 28, 2018, [CCW/GGE.2/2018/WP.4](#)
- ❑ Implementing International Humanitarian Law in the Use of Autonomy in Weapon Systems, March 25, 2019, [CCW/GGE.1/2019/WP.5](#)
- ❑ [U.S. Commentary on the Guiding Principles](#), Sept. 1, 2020