

# ETHICAL CHALLENGES IN THE DEVELOPMENT OF NEW WEAPONRY

## DETAILS

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### When

Thursday, September 26, 2019

### Where

Fitts Auditorium, University of Pennsylvania Law School

3501 Sansom Street

Philadelphia, Pennsylvania 19104

USA

### Websites

[CERL HOMEPAGE](#)

## AGENDA

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9:00 am – 9:30 am

Registration

9:30 am – 9:35 am

Welcome Remarks

9:35 am – 10:45 am

Panel 1: Cyber Security and Artificial Intelligence (AI)

10:45 am – 11:00 am

Break

11:00 am – 12:15 pm

Panel 2: Biological and Chemical Convergence

12:15 pm – 1:30 pm

Lunch - *Audience members are on their own for lunch. (CERL will provide information on local eateries.)*

1:30 pm – 2:45 pm

Panel 3: Biological Enhancements and Genetics

2:45 pm – 3:00 pm

Break

3:00 pm – 4:15 pm

Panel 4: Nanotechnology

4:15 pm – 4:30 pm

Break

4:30 pm – 6:00 pm

Keynote Address: U.S. Army General Joseph Votel (ret), Fmr. Commander, United States Central Command

6:00 pm – 7:00 pm

Reception (*open to the public*)

## KEYNOTE ADDRESS

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**U.S. ARMY GENERAL JOSEPH VOTEL (RET),  
FORMER COMMANDER, UNITED STATES CENTRAL COMMAND**



Followed by a Q&A moderated by [Professor Claire Finkelstein](#),  
CERL Faculty Director and Algernon Biddle Professor of Law and Professor of Philosophy



**CONFERENCE:** *This program has been approved for 5.0 ethics CLE credits for Pennsylvania lawyers. CLE credit may be available in other jurisdictions as well. Attendees*

*seeking CLE credit should bring separate payment in the amount of \$200.00 (\$100.00 public interest/non-profit attorneys) cash or check made payable to **The Trustees of the University of Pennsylvania.***

**KEYNOTE:** *This program has been approved for 1.5 ethics CLE credits for Pennsylvania lawyers. CLE credit may be available in other jurisdictions as well. Attendees seeking CLE credit should bring separate payment in the amount of \$60.00 (\$30.00 public interest/non-profit attorneys) cash or check made payable to **The Trustees of the University of Pennsylvania.***

## **OVERVIEW**

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Technological advances have improved current weapons systems and led to the development of more precise means and methods of warfare. But they have also created tools that can kill with an efficiency and in a manner previously unimaginable. Compounding the danger is the fact that advances in technology reduce traditional barriers to entry, increasing the likelihood these new weapons will fall into the hands of rogue actors. The new lethality of contemporary weaponry also puts civilians more directly in harm's way, despite the increased precision and potential reduction in collateral damage presented by the new systems. Finally, the speed at which new weapons are being developed severely impacts the ability to create adequate defenses, and nations are impelled into increasingly offensive postures as they address their expanding national security concerns.

The need to develop a nuanced balance between advancing precision technologies and protecting against the impact of increasing lethality suggests the importance of increased consultation among military experts, the defense industry, and ethicists. While the public is aware of ethical debate surrounding the development of Autonomous Weapons Systems (AWIs), the popular opposition to so-called "killer robots" overlooks the increasing sophistication and ethical complexity of many other types of weapons systems where the same need to balance improvements in precision against exponential increases in lethality exists.

The purpose of this one-day public symposium is three-fold: 1) to examine rapidly advancing technologies in war and discuss legal and ethical dilemmas they raise for national security policy in an interdisciplinary conversation; 2) to help guide elected officials and other government policymakers in the development of military technology; and 3) to educate the general public on the implications of these technologies for democratic governance and their role in furthering national security.

The symposium will address four domains of new weaponry development: cybersecurity and artificial intelligence (AI); biological and chemical convergence; biological enhancements and genetics; and nanotechnology. Panels will consist of lawyers, ethicists, scientists, military and government service practitioners, technologists, and the private sector. Panelists will address the risks that new weaponry will be used for malign purposes; the relative ease with which weaponry may be acquired, the adequacy of current regulatory measures, the need for new or better oversight, the relationship between military requirements and private sector innovation, and the need to identify and resolve important ethical and legal issues prior to full scale development and deployment of new weaponries.

The symposium concludes with a public keynote presentation by retired U.S. Army General Joseph L. Votel. During his service in the United States Army, General Votel held numerous command positions, to include serving as Commander of U.S. Special Operations Command and Commander of U.S. Central Command. Beginning in January 2020, General Votel will serve as chief executive officer of Business Executives for National Security (BENS), a nonpartisan, nonprofit organization of senior industry executives who apply best business practices to address the nation's pressing security challenges.