Stopping Killer Robots: Considerations for an Autonomous Weapons Convention

Mark A. Gubrud
Program on Science and Global Security, Princeton University
mgubrud at princeton dot edu

Abstract: Dramatic growth in the use of drones and robotic systems in warfare by the United States since 2001 has led to rapid global proliferation and a fast-paced robot arms race, with severe implications for nuclear arms control and other aspects of international and human security. While most of the systems in use today are remotely operated, there has been increasing interest in the use of artificial intelligence to make robotic systems more autonomous.

The most salient and profound issue is armed autonomous robotics, or systems that can autonomously determine the selection and engagement of targets. A strong moral argument posits that this is a red line which we should not cross. A growing global movement is demanding the prohibition of such "killer robots." However, in November the Pentagon announced a policy indicating the intent to develop, acquire and use autonomous weapon systems.

This talk will address the following questions:

* What are autonomous weapon systems?
* Why is this an issue now?
* What makes AWS dangerous?
* What is the current status of AWS?
* Why a ban on AWS, and on what basis?
* What would an AWS convention look like?
* What compliance measures are proposed?
* What questions call for further research?

Bio: Mark Gubrud is a postdoctoral research associate at the Program on Science and Global Security, Princeton University. Previously he was an adjunct professor of physics at the University of North Carolina. His PhD in experimental physics was completed in 2010 at the University of Maryland, College Park. He is a member of the International Committee for Robot Arms Control.