

# Mini-symposium **Military Applications of Robotics** From Research and Deployments to Legal and Ethical Questions

## TOC Ariake, Room WG201 (5 min walk from IROS venue) 19:30 - 21:30, November 6th (Wednesday), 2013

#### Are robotic weapons just like any other weapon ? Should robotic weapons be banned or encouraged ? What stance and actions should we take as robotics researchers ?

Military robots are no more restricted to science-fiction novels or to a distant future but have become a concrete reality. Autonomous aerial robots – or drones – are for instance currently deployed, mainly by the US Army, in several countries such as Afghanistan, Pakistan, Yemen, or Somalia. According to independent investigations, such robots have caused several thousands of casualties, including a non-negligible number of civilians. As a result, military applications of robotics are focusing a large attention from the civil society, prompting field researches on the consequences of drone strikes, as well as legal and ethical debates about this new military technology. The case is considered so serious that the UN has recently decided to set up dedicated investigations into US drone strikes.

At the same time, within the academic robotics research community, there are a considerable number of programs that are motivated by military applications and/or funded by military agencies. Many of the advances obtained in such programs have been or will be used in building operational military robots. It is thus evident that robotics researchers, who stand at the very beginning of the chain that eventually leads to operational military robots, must take an important part in the societal debate mentioned above.

The goal of this mini-symposium is to stimulate the debate on military applications within the robotics community. To this end, we shall briefly present facts and data about the current research and deployments of military robots (technologies, casualties, economic and psychological consequences, etc.), as well as elements of legal and ethical reflections about military robots. The major part of the symposium will then be dedicated to the open discussion among the participants.

### Organizers

Quang-Cuong Pham Assistant Professor NTU, Singapore

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## **Brief introductions**

Survey of recent reports on the use and consequences of military robots (Human Rights Watch, Amnesty International, Stanford and NYU law schools, etc.) (By LR)

Elements of legal and ethical reflections about military robots (By QCP)



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This mini-symposium is not part of IROS.