Invited Session Summary

Title of Session
Artificial intelligence and security in unmanned systems

Name, Salutation, Affiliation and Email of Organizers

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Details of Session (including aim and scope)

In recent years, intelligent unmanned systems have been widely used in various industries and shown excellent performances, however there are many security vulnerabilities and risks in real-world usage. On the one hand, from the perspective of intelligence, the degree of intelligence of unmanned systems is rapidly increased, and its application gradually changes from the functional level to the decision-making level. Therefore, it is necessary to explore the explainability of intelligent unmanned systems. On the other hand, from the perspective of security, as the degree of intelligence increases, unmanned systems are facing more and more vulnerabilities and risks (such as counterattacks). Therefore, it is necessary to study the security of intelligent unmanned systems. This session will focus on the AI and security of unmanned systems, and covers the applications of artificial intelligence, network security, and resilience theory in unmanned systems, which is very important for the development of unmanned systems in the future.

This session will bring together experts from artificial intelligence, unmanned system control, network security communities. We attempt to highlight recent related work from different communities, clarify the progress of intelligence and safety of unmanned systems, and chart out important directions for future work and cross-community collaborations.