

2022 第十届中国指挥控制大会 特邀专题论坛简介

特邀专题名称

智能无人指挥控制

召集人的姓名、职称、单位和邮箱

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特邀专题简介（背景、目的、意见和内容）

近年来，陆、海、空、天等领域对无人系统的需求与日俱增。在面对复杂、恶劣环境的情况下，智能化、自主化是今后的重要发展方向。随着人工智能技术的不断发展，智能无人系统指挥控制的创新研究出现在人类视野范围内。智能化无人装备的广泛应用，对未来战争的影响和改变必将是整体性和革命性的。

另外由数量众多的智能无人装备组成的“蜂群”无疑是未来无人系统发展的重要方向。“蜂群”作战是近些年来世界各国军队争相研究着力打造的新型作战模式。“蜂群”以其独有的“大规模”“低成本”“高分散”“强饱和”等技战术特点，区别于当前的“高性能”“多功能”“小规模”“精确化”的精兵作战，极具颠覆性色彩，外军甚至称其为核武器技术以来军事技术领域最重要的发明。通过深入研究智能无人指挥控制，为打赢未来战争争取主动权。

本特邀专题邀请以下与“智能无人指挥控制”主题相关的包含创新思想、概念、新发现、改进以及新应用的原创论文。

- 智能化无人装备
- 无人集群战法和运用方式
- 无人系统指挥控制中的优化问题
- 无人系统指挥控制中的智能决策问题
- 拒止环境中的无人系统指挥控制
- 无人集群协同决策、规划、控制
- 群体智能和无人集群

C2-China 2022
Invited Session Summary

Title of Session

Intelligent unmanned command and control

Name, Salutation, Affiliation and Email of Organizers

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Chen Xiliang, Associate Professor, College of Command and Control Engineering, Army Engineering University

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Details of Session (background, purpose, significance and scope)

In recent years, the demand for unmanned systems in land, sea and air is increasing. In the face of complex and harsh environment, intelligent and independent development is an important direction in the future. With the continuous development of artificial intelligence technology, the innovative research of intelligent unmanned system command and control appears in the range of human vision. The wide application of intelligent unmanned equipment will have an overall and revolutionary impact on the future war.

In addition, swarm composed of a large number of intelligent unmanned equipment is undoubtedly an important direction for the development of unmanned systems in the future. In recent years, "swarm" operation is a new combat mode that the armies of all countries in the world strive to study and build. With its unique large-scale, low cost, high dispersion, strong saturation and other technical and tactical characteristics, "Swarm" is very subversive compared with the current high performance, multi-function, small scale and precise operations of elite troops. International forces even call it the most important invention in the field of military technology since nuclear weapons technology. Through in-depth research on intelligent unmanned command and control, to win the initiative of the future war.

This special topic invites the following original papers on innovative ideas, concepts, discoveries, improvements and applications related to the topic of intelligent unmanned command and Control.

- Intelligent unmanned equipment
- Unmanned swarm warfare and its application
- Optimization of unmanned system command and control
- Intelligent decision making in unmanned system command and control
- Command and control of unmanned systems in the denied environment
- Unmanned swarm collaborative decision-making, planning and control
- Swarm intelligence and unmanned swarm