

Cooperative Control and Intelligent Games in Autonomous Systems

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The research on autonomous systems powered by cooperative control and intelligent games has witnessed an increasing interest in recent years. The learning-based methods such as supervised/unsupervised learning, deep learning, and reinforcement learning (RL), have made great progress in autonomous systems. Recently, the cooperative control and intelligent games algorithms has been used in autonomous systems and its many applications, such as unmanned aerial vehicles (UAVs), unmanned ground vehicles (UGVs), unmanned surface vehicles (USVs), unmanned underwater vehicles (UUVs) and robots. The focus of this invited session will be on cooperative control and intelligent games in autonomous systems presenting considerable novelties in theoretical background or practical design. The solicited papers should provide original ideas and new approaches, with clear indication of the advances made in problem formulation, methodology, or application. Topics to be covered include, but are not limited to, the following: advanced artificial intelligence algorithms, cooperative control in autonomous systems, game theory, swarm intelligence, and robustness issues on new developments in autonomous systems.

面向自主智能体的协同控制与智能博弈

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近年来, 面向自主智能体的协同控制与智能博弈已经成为当前研究的热点问题。基于学习的方法, 比如监督/非监督学习, 深度学习和强化学习, 已经在自主智能体系统的研究中起到了重要的作用, 并取得了很大的研究进展。最近, 基于协同控制与智能博弈的相关算法已经应用在诸如无人机、无人车、无人船、无人潜器、机器人等自主智能体系统中。本专题论文主题包含但不限于: 人工智能算法, 自主系统协同控制, 博弈论, 集群智能, 自主系统中的鲁棒性相关新趋势。