ICIEA 2022 Special Session

Title of session	Recent developments in adaptive control design and decision-making
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Summary of session	Most practical engineering systems are characterized with complex structures, high nonlinearities and strong dynamic couplings, yet operating under severe and dynamic environment, making the control problem of such systems rather complicated. Over the last several decades, adaptive control theory has evolved as a powerful strategy for designing nonlinear feedback controllers for systems with parametric uncertainty. Hence, adaptive control, parameter estimation for complicated uncertain systems are uncertain technical issues to be improved. Extensive efforts are being done in academia to improve the technologies for efficient control, better transient performance and ability to handle the uncertain systems. Recently, addressing the consensus of multi-agent systems (MAS), decision-making methods are always incorporated with adaptive control methods to research these problem, which attracts much researches due to its significant potential applications for a large range of real systems. The purpose of this special issue is to create a platform for scientists, engineers and practitioners to present their latest theoretical and technological advancements in adaptive control, parameter estimation and fault-tolerence techniques for uncertain systems, as well as decision-making methods or cooperative control methods for complicated real systems. The focus will be on the advanced and the non-traditional approaches that incorporate considerable novelties. Topics of interest include but not limited to: Nonlinear adaptive control Adaptive fuzzy/neural control Decision-making method Sliding mode adaptive control Adaptive fault-tolerant control

	Stability and robustness analysis Adaptive consensus control multi-agent systems Adaptive control under cyber attacks Parameter estimation