Brain-like intelligent flight vehicle and group collaboration technology

Organizers:

Prof. Ruixuan Wei, Aeronautics Engineering College, Air Force Engineering University, China, rxwei369@sohu.com

Prof. Xiaokui Yue, School of Astronautics ，Northwestern Polytechnical University

Assoc. Prof. Chen Wei, School of Mechanical Engineering and Automation BUAA

At present, the task environment faced by intelligent flight vehicle is becoming more and more complex. Fast response, superior game-playing, and group collaboration have become typical task requirements, which require that the flight vehicle comes with highly autonomous task decision-making and control capabilities. It is an important direction for the development of intelligent flight vehicle technology to utilize brain-like intelligence to achieve autonomous flight and efficient collaboration of intelligent flight vehicle for the complex mission environment. This topic focuses on aviation and aerospace intelligent flight vehicle and its related fields, discusses and shares with a majority of scholars and researchers in terms of the latest development of related theories, methods and technologies of autonomous control and group collaboration of the flight vehicle with reference to brain-like intelligence, so as to jointly promote the application and development of brain-like intelligent flight vehicle. Topics include, but are not limited to the control architecture of brain-like intelligent flight vehicle, brain-like intelligent decision theory, brain-like intelligent system excitation and convergence based on brain-like intelligence, group intelligence decision control, and task-oriented flight vehicle cluster coordination control, etc.

类脑智能飞行器及群体协同技术

组织者：

魏瑞轩，教授，空军工程大学航空工程学院，rxwei369@sohu.com

岳晓奎，教授，西北工业大学航天学院

魏晨，副教授，北京航空航天大学自动化学院

当前，智能飞行器面临的任务环境越来越复杂，高动态、强博弈、群体协同等已成为典型任务要求，需要飞行器具备高度自主的任务决策和控制能力。借鉴类脑智能，实现智能飞行器面向复杂任务环境的自主飞行与高效协同，是智能飞行器技术发展的重要方向。本专题面向航空、航天智能飞行器及其相关领域，与广大学者和研究人员共同探讨和分享借鉴类脑智能的飞行器自主控制和群体协同的相关理论、方法和技术的最新进展，共同促进类脑智能飞行器的应用和发展。专题内容包括但不限于类脑智能飞行器控制架构、类脑智能决策理论、借鉴类脑智能的群智系统激发与汇聚、群体智能的决策控制、面向任务环境的飞行器集群协调控制，等等。