Invited Session Proposal for
2020 International Conference on Guidance, Navigation and Control

Guidance and control law design for Reusable launch vehicles

可重复使用航天运载器的制导与控制

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Abstract：Reusable launch vehicles (RLVs) technologies are attracting great attention in space activities due to the fact that they can be reused and the cost of access to space is thus significantly reduced. In the past decade, the major powers in the world have invested heavily in R&D of RLV. For unpowered vehicles, there is only one opportunity to reentry, and the precision requirement of guidance and control increases along with the decreasing of flight altitude. Although a lot of efforts have been devoted to improve the performance of guidance and control systems of RLV, many open problems are still unsolved, such as integrated guidance and control law design, reconstruction of reentry trajectory, and fault-tolerant flight control. These technical difficult problems are vital for security and reliability of the reentry phase of a RLV and it is desired to develop effective solutions.

Call for papers: This topic includes but not limited to: reentry trajectory design, guidance and control law design with complex uncertainties, integrated guidance and control.

Keywords: Guidance and Control; Reusable launch vehicles; Fault tolerant control; Robust Control