

## عنوان مقاله:

Robust Variable Structure Dynamic Sliding Mode Control of VTOL Aircraft

## محل انتشار:

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## خلاصه مقاله:

In this paper, a design of autopilot for a Vertical Take-Off and Landing (VTOL) aircraft to track a predetermined desired flight path is examined. This system is a nonlinear non-minimum phase system. Since this aircraft faces to external distributions (e.g. wind) in flight, so designing of a controller with robust performance is critical to achieve an optimal flight performance, despite presence of the external distributions. For this purpose, the dynamic sliding mode technique which is a robust method in the controller designing for nonlinear systems with uncertainties is used. By using the above method, the autopilot control law is designed in such a way that the aircraft tracks the predetermined optimal paths (which are determined on type of aircraft missions). Simulations show effectiveness of the proposed control law

## کلمات کلیدی:

VTOL aircraft, dynamic sliding mode control, robust control

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/388567>

