

## Designing Back-Stepping Sliding Mode Controller for a Class of 4Y Octorotor

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**Abstract :** This paper presents a combination of both robust nonlinear controller and nonlinear controller for a class of nonlinear 4Y Octorotor UAV using Back-stepping and sliding mode controller. The robustness against internal and external disturbance and decoupling control are the merits of the proposed paper. The proposed controller decouples the Octorotor dynamical system. The controller is then applied to a 4Y Octorotor UAV and its feature will be shown.

**Keywords :** sliding mode, backstepping, decoupling, octorotor UAV

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