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This paper discusses flying objects' adaptive control with direct application to the flight of helicopters. Two new automatic adaptive control systems are suggested: the former is used for pitch angle control, while the latter is used for control of helicopter pitch angle and velocity; this second system is an extension of the first one.

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Unmanned-aerial-vehicle helicopter, yaw control, model free adaptive control, internal model 1. INTRODUCTION The potential use of unmanned-aerial-vehicle (UAV) helicopter can be applied in military and civilian, although military applications dominate the non-military ones. Military and civilian

The problem of 3DOF motion control for Quanser/LAAS "Helicopter Benchmark" laboratory setup is considered. Based on the passification design method and the Implicit Reference Model approach, the adaptive control laws are designed and experimentally tested. The MATLAB/Simulink and WinCon software environments are used for adaptive control laws implementation and conducting the real-world ...

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