

SOUTENANCE DE THESE

Majd SAIED

Unité de Recherche : UMR 7253 - Laboratoire Heudiasyc

soutiendra sa thèse de **Doctorat**

sur le sujet :

Fault Tolerant Control of an Octorotor Unmanned Aerial Vehicle under
Actuators Failures

A l'Université de technologie de Compiègne
Le vendredi 8 juillet 2016 à 8h
Amphi N104 – Centre Pierre Guillaumat

Résumé :

In this thesis, fault-tolerant control approaches for multirotor UAVs under multiple actuators failures are investigated.

Many research studies on Fault-Tolerant control of unmanned aerial vehicles have been developed in the literature. However, only some of them are applied to real UAV systems during flights. Moreover, many of these methods do not take into account the fault diagnosis module and consider that the fault has already been detected and isolated properly.

In this thesis, both aspects of FTC systems are considered on a coaxial counter-rotating octorotor after multiple successive and simultaneous actuators failures. The main concern was to propose approaches that can be effective, easy to implement and to run on-board the UAV.

The different proposed architectures are validated on a coaxial octorotor but can be generalized on any multirotor system with minor modifications.

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