Robust Parafoil Heading Angle Control Using H-infinity Method

Parafoil uncertainty of dynamic model and environment is an important problem which causes the failure in mission. This paper is based on an empty place for robust control in similar works. Similar works use classical controllers that have a few robustness by their natures or controllers which need lots of online calculations and therefore high-tech processors. The current paper assumes a range of uncertainty on a coefficient of the model and simulate the noise and wind disturbance. After designing an H-infinity robust controller it is showed that the controller has a better robust stability and performance against a PD controller. The results are simulated in Simulink on the nonlinear plant.

Keywords: robust control, parafoil, heading angle control

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