

Review of: "Neuro-Fuzzy-Based Adaptive Control for Autonomous Drone Flight"

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Potential competing interests: No potential competing interests to declare.

Review comments -

First of all, the paper is well intended but lacks core information and clarity on the proposed control system.

As a control paper it is fundamental to describe the design and details of the proposed controller and its stability proof in this combination. Without these two important details this paper cannot be considered in the domain of control system research.

Some basic introduction to both LQR and ANFIS must be included for this paper to be considered for novel application of this controller combination without this it is difficult for a general reader to understand and comprehend the paper.

The claims of the contribution are not substantiated in the paper in any satisfactory manner because of the reasons above. Overall this is an incomplete first draft of a paper that needs some critical update based on the reviews for it to be considered as a research paper.

Tips and suggestions-

Other points to consider is the usefulness of this combination. There are many fuzzy-neuro controllers that work online- that is without any offline training such as the paper titled -

Real-Time Adaptive Intelligent Control System for Quadcopter Unmanned Aerial Vehicles With Payload Uncertainties - "<https://ieeexplore.ieee.org/abstract/document/9345431>"

So what is the benefit of still using the offline training based complicated mechanism? An analysis of its benefits compared to the paper above can be explored.

The authors have done work on the dynamic simulation model of the UAV and it needs to be capitalised for more thorough work. My suggestion to the authors is to validate the developed simulation model with an experimental platform to verify its accuracy for setting a base for future work and starting from here will give more legitimacy to their setup.

All the best.

