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

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Potential competing interests: No potential competing interests to declare.

This paper proposes the design, development, and application of an intelligent adaptive hybrid controller to control and stabilize a drone. The training data for adaptive neuro-fuzzy inference systems (ANFIS) are generated by the Linear Quadratic Regulator (LQR) under white-noise disturbance. The trained ANFIS is subsequently used to estimate the parameters of the control distribution matrix for the actual fault condition and the reconfiguration is carried out by computing new feedback gain using the pseudo-inverse technique. Preliminary numerical simulation results are presented to control and stabilize a quadcopter drone.

After the review process, the reviewer offers constructive feedback and suggestions to assist the authors in enhancing their manuscript. While the authors have introduced an exciting method and presented many encouraging results, it is noted that the current contents of the manuscript only marginally meet the standards expected of scientific papers. Therefore, further improvements are necessary:

1. The authors are strongly encouraged to further improve the state-of-the-art revision, since there exist other autonomous aerial unmanned systems for which the ANFIS and LQR theories have been successfully implemented, please check the research: **Stabilization, tracking, and disturbance rejection control design for the UAS-S45 Bálaam**.
2. It is not clear why the authors include in the manuscript the control surfaces and throttle deflections as control inputs (as in the analysis of fixed wing drones) if the vehicle under study is a rotary wing vehicle, please explain.
3. The authors are strongly encouraged to ensure that all expressions throughout the manuscript are adequately explained, as several pitfalls have been observed.
4. In general, the quality of the figures in the manuscript should be improved. Consider addressing issues such as resolution, clarity, and labeling for improved visual representation.
5. The reviewer thinks that further discussion should be included on the vehicle subjected to unknown disturbances to assess the performance of the proposed control scheme. Additionally, there should be a discussion on the proper simulation results.
6. What are the parameters values used in simulations?
7. The authors are strongly encouraged to provide further explanations regarding the main sensitive parameters that can impact the methodology's performance.
8. The reviewer believes that the abstract can be further improved based on the provided information/results.
9. Some further research topics could be discussed in the conclusion with limitation analysis.

10. Including a table or list of acronyms, abbreviations, and variables would enhance the presentation of the paper.