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

Jyotindra Narayan[1]

1 Imperial College London

Potential competing interests: No potential competing interests to declare.

The manuscript on presents an overview of adaptive control for autonomous vehicles, specifically quadrotors, but it lacks clarity in several essential concepts, leaving gaps in understanding. These are following suggestions.

1. The coherence regarding the choice of aerial vehicles is inconsistent, with mentions of both quadrotors and fixed-wing aircraft throughout sections.
2. The introduction requires more convincing justification for choosing Adaptive Neuro-Fuzzy Inference System (ANFIS) and a comprehensive review of ANFIS applications.
3. The dynamical system lacks explicit definition of inputs and outputs. The proposed method lacks crucial details on the type of fuzzy logic used, including membership functions, fuzzy rule formulation, and defuzzification methodology.
4. The article fails to explain why alternatives, such as neural networks alone, were not selected, and lacks a thorough comparison with alternative algorithms.
5. Experimental results need clarification, proper comparison, and an explanation of desired outcomes.
6. The manuscript also suffers with unclear formulas, inconsistencies in figures, long time to reach desired angles, and a lack of practical application discussions.
7. The authors are suggested for improvements in detailed comparison with previous studies, correction of typographical errors, updated software and system for experiments, clearer visuals, detailed noise clarification, and careful proofreading for grammar and formatting.

Overall, the manuscript's multiple shortcomings and suggested improvements make it unfit for publication in its current state.