# Author’s Response to the Review Comments

*Title of Paper* : *Position Control of VTOL Systems using ANFIS via Hardware in The*

*Loop*

We appreciate the time and efforts by the editor and referees in reviewing this manuscript.

| **Comment** | **Response** | **Location of Response in Revised Manuscript** |
| --- | --- | --- |
| **REVIEWER A COMMENTS** |  |  |
| The contribution and the importance of the research must be stated clearly. | The result of this experiment can be used to determine which controller that base suited in VTOL position control. It also gives an information about the effectiveness of HIL method in prototyping. | Added in section I, paragraph 8 |
| All the Figures and Tabel must be cited in the sentence/ paragraph for example in Figure 1, in Table 1. | Have been done | All figures |
| Please use Grammarly to check your manuscript. The free Grammarly is enough for fixing some typos and grammar mistakes. Proofreading is recommended to increase the quality of the English language and writing. | Already checked | All text |
| The author must follow the template journal and the similarity must be under 30% or the manuscript will be rejected. | The similarity index from Turnitin is only 13 % |  |
| The decimal number must be written by a period, not a comma. | Have been done | Table 7 |
| Please give information and the name of the component in Figure 1 and Figure 2. | Have been done | Fig. 1 and 2 |
| Please give information about the variable "e" in Table 8 and Table 9. | ‘e’ is means exponential. It has been changed by 10x | Table 4 to 10 |
| **REVIEWER B COMMENTS** |  |  |
| What is the PID control for? What to be achieved is not well described. The results presented not well discussed, even compare with other controllers such as FUzzy and ANFIS. | In this analysis, PID is used as the base for comparison. Therefore, the PID parameters value is considered as 100 %. FLC and ANFIS performances are compared to PID to determine the best one in some parameters value. Table 10 and Table 12 are percentage comparisons when PID is the base of comparison for Table 9 and Table 11, respectively. | Result and discussion, part C. Paragraph two |
| Motivation and Contributions are not clearly stated. | The result of this experiment can be used to determine which controller that base suited in VTOL position control. It also gives an information about the effectiveness of HIL method in prototyping. | Added in section I, paragraph 8 |
| Based on your testing, what are the findings? Your research must have a novelty when compared to previous research. Please write it down! | The contribution of this research is to compare the performance of PID, FLC, and ANFIS in the position control system of VTOL via HIL. The result of this experiment can be used to determine which controller that base suited in VTOL position control. It also gives information about the effectiveness of the HIL method in prototyping. | Added in section I, paragraph 8 |
| **REVIEWER C COMMENTS** |  |  |
| Many typo errors and missing article of a word to show single or plural. | Checked by Grammarly |  |
| Base on the statement on page 1 that "The other researchers propose Fuzzy Logic Controller (FLC) [5] or Adaptive Network-based Fuzzy Inference System (ANFIS) [6]. This control system can be implemented and able to handle changes in system conditions even though the plant model is unknown [7]. Research and development methods for VTOL will continue to develop along with the development of aircraft types or models." Please find new references (last 5 years) to show that the ANFIS better than others. | Already added, ref. [7] and [12] | Part Introduction |
| In conclusion, add numerical based on the experimental results, not only a general statement. | Already added | Part conclusion |