

Reviewer Observations and Suggestions:

ABSTRACT:

Can be added in the conclusion. Also correct the spellings. Statements “These results depicts conclusively that Hybrid Neuro-Fuzzy controller application in intelligent clutch actuation control of an electro-pneumatic clutch system for heavy-duty vehicle will have over the use of a single mode of either fuzzy logic or Artificial Neural Network. Its impact in the smooth operation of heavy-duty vehicle is indeed significant in the improved performances in an electro-pneumatic clutch actuation system.”

Make the statement short and meaningful

These results depicts conclusively that Hybrid Neuro-Fuzzy controller application in intelligent clutch actuation control of an electro-pneumatic clutch system for heavy-duty vehicle will have over the use of a single mode of either fuzzy logic or Artificial Neural Network.

Add recent work done through the recent research papers. Author provided the complete clutch system details through literature papers. Please do provide the work done for the issues addressed by author.

Mention the Significance of the system and Innovations.

Page no 4:

Typo corrections: Fig. 1 and fig. 2.: Do use the same terminology as per Journal format template figs. 1. and 2: Improper use the terminology as -> figs

Long and Incomplete Statements: Make it short and meaningful:

The learning phase shows a behaviour that is characteristic of neural networks that assimilate or learn its own variables within and un-aided.

The execution phase of behaviour exhibits the fuzzy logic system character. Independently, either of the learning and the execution characteristic phases have merits and demerits.

The combination of the two provides better results compared with the results recorded with the application of either of the isolated methods.

Page 5

Long Statement: Make it short and meaningful

In control systems design, there is a greater need to tackle successfully the challenges brought about by increasing global competition in technology, environmental considerations, energy requirements, economy of material and the demand for stable, robust and fault tolerant systems.

.It is a powerful model that ensures that information from empirical data sources and error prone unclear model sources are effectively combined to solve a problem.

The neuro-fuzzy solution model utilizes the fuzzy IF-THEN rules described in a network structure and the neural network learning algorithms approach to provide solutions to a complex system (Babuska, 2002).

This model can also be automated and thereby reduce to some extent; time and cost wasted in an effort to improve performance of a fuzzy system.

Specifically, while making decisions based on imprecise data is allowed by fuzzy logic, ANN on the other hand tries to integrate human thinking process in solving problems without modelling them mathematically.

The only impediment to this is the comparative slow learning process and the difficulty in the analysis of the trained neural network or the black box system.

Put the fuzzy logic advantages and disadvantages in a listed or tabular form.

Section 3.0

Request the author to add methodology [Either a List or Flowchart] illustrating the entire process.

Mention what are this: Technical terms need to be explained and presented with significance: They are negative high (NH), negative medium (NM), negative low (NL), zero (Z), positive low (PL), positive medium (PM), and positive high (PH) respectively.

ANN controller design can be well presented in a listing or tabular form instead of text or statements. The ANN controller design can be shown at a glance with the net view of MATLAB in graphical format.

Page10:

Long Statement: Make it short and meaningful

The Neuro-Fuzzy Simulink model controller design was cascaded with the conventional control block in series to the Fuzzy logic block on the upper end and in series also with the ANN block on the lower end

The design is shown in figure 8. (Author used fig, Fig and figure alternatively please do follow one format.)

Page12:

Long Statement: Make it short and meaningful, also check for the spelling and grammatical mistakes.

Conventional controller and Neuro-Fuzzy controller data for proportional error is tabulated and plotted below for comparison in table 4, graph and bar chart of figs. 9(a) and (b) respectively.

Justify the result in table 4:

%Difference	0	-96.61
-------------	---	--------

Graphs and Figures need to be in a clear and visible on paper. Provide the justification of the graph and results presented.

Improper use of word: **figs. 12 (a) and (b)**

Long Statement: Make it short and meaningful

From these results, one can conclude that the performances of the Hybrid Neuro-Fuzzy controller are dynamic enough to eliminate the challenges of calibration required in conventional controller in order to tackle problems associated with clutch loadings

Page10:

Long Statement: Makeit short andmeaningful