A Study of A Flexible Structure with Nonlinear Coupling by Using Neuro-Fuzzy Approach

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ABSTRACT

In current literature, flexible structures have become the focus of many studies. A major challenge of research is currently in progress ion designing active and passive vibration control mechanisms to deal with this kind of problem [1].

In this work a neuro-fuzzy system is presented and applied to a Non-Linear Robotic System with two degree of freedom with two-link and cubic nonlinearity [2]. This cubic non-linearity characterizes the flexibility of the considered system.

The Dynamic Behavior is obtained by using numerical simulations and by using fuzzy logic approach one derives the control laws[3]. The control system is simulated for obtaining a desired response. The improve the vibrating system as stable one. This desired response is in this direction that the considered system will be stable.

References