



## Modeling and interval type 2 fuzzy logic controller of manipulator robot

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**Abstract:** This paper presents the interval type 2 fuzzy logic controller (IT2FLC) for a manipulator robot system. After dynamic modeling and system state modeling, we presented the method of the fuzzy logic control, the efficient interval type-2 fuzzy controller is designed for trajectory tracking of two DOF robotic manipulator. A comparative study is made between the proposed interval type 2 fuzzy logic control technique in the presence of variation of parameters. The results obtained show that the proposed IT2FLC has a superior robustness against difference of parameters where the two DOF robotic manipulator system functions with satisfactory performance.

**Keywords:** Interval type 2 fuzzy logic technique, PID control, state space system, two DOF robotic manipulator.

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