



Fuzzy Based Model Adaptive Reference Controller for Nonlinear Systems

Swati Mohore
swatimohore@gmail.com

Dr. Mrs. Shailja Shukla
shaija270@gmail.com

Abstract— The objective of the model reference adaptive fuzzy control. The MRAFC is composed by the fuzzy inverse model and a knowledge base modifier. Because of its improved algorithm, the MRAFC has fast learning features and good tracking characteristics even under severe variations of system parameters. The controller produces the error of the closed loop control system response and the actual system output for the desired system by reference model, instead of ordinary adaptive mechanism. The analysis of dynamic performance for traditional controller and fuzzy adaptive controller is performed in detail with simulation software. Simulation results show that the system is with strong adaptive ability and can adapt to the wide range of changes of the controlled object.

Keywords: Model Reference Adaptive Controller (MRAC), Fuzzy-MRAC Model.