FUZZY DATA WINDOW MEMORY AND ITS APPLICATION TO SYSTEM IDENTIFICATION BY GA

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ABSTRACT—In this paper, an approach for storing and retrieving the past data by means of a novel Fuzzy Data Window Memory (FDWM) is reported. The data, which is selected for memorization, is based on the highest firing strength of the fuzzy rule. The size of the proposed FDWM is much smaller than traditional window memory with no degradation in performance. A computer simulation study of one of the applications of the proposed FDWM is reported which uses the FDWM to reduce the training data set that will be used in the evaluation module in system identification by Genetic Algorithms (GA).

Key Words: Fuzzy Data Window Memory, Fuzzy identification, Genetic algorithms