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# An optimal defuzzification method for interval type-2 fuzzy logic control scheme

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**Abstract:** In Interval Type-2 Fuzzy Logic Systems, the output is an interval type-1 set determined by the left and right end points. In conventional defuzzification method, the defuzzified crisp output is obtained by averaging these left and right end points of the type reduced set. With this defuzzification method, the capability of the system cannot be used effectively. In this study, a new defuzzification method which uses an optimization algorithm is proposed for IT2 FLCs. This optimization algorithm is applied on the left and right end points to select the best point inside the interval to enhance the performance of the IT2 FLC. Simulation results are presented to show the effectiveness of the proposed defuzzification method.

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