

New control algorithm and defuzzification

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Fuzzy defuzzification is one of the most important part of the fuzzy control. Several approaches exist. Mamdani uses the α -cuts and builds the union of the membership function.

The resulted function is the starting point of the defuzzification process. In this article we define more natural way to get the membership function by using fuzzy arithmetics. The defuzzification is the optimum value of the resulted membership function.

The main idea is that the membership function a soft inequality which we call distending function and we handled the left and right hand side of the inequalities.