Abstract

Determination of the parameters of the membership functions of a fuzzy logic control process is the crucial factor for providing optimum performance of the system. These parameters are regarded as variables and are tuned through Particle Swarm Optimization (PSO). The shape of the membership functions vary according to the variables. Consequently, the fuzzy control output changes and so does the performance. The results give an insight to the efficiency of PSO in producing optimum membership functions in real time. This controller can be applied to various control systems like AGC (Automatic Generation Control), DC motors etc. Demonstration for the latter is shown in this paper.

References

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