Abstract

In this paper, a fuzzy controllers type Takagi_Sugeno is optimized by method of Particle Swarm Optimization (PSO). This algorithm automatically adjust the membership function of fuzzy controllers to control a trajectory of nonholonomic mobile robot that involves path trajectory using two optimized fuzzy controllers one for speed control and the other for azimuth control. The mobile robot is modelled in Simulink and PSO algorithm is implemented using MATLAB. Simulation results show good performance for the proposed control scheme. The results will compared with PSO-PID controllers that control the same model of mobile robot.

References

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PSO-PID