Abstract

In this paper, mobile robot control system for dynamic model is implemented by using wavelet neural network and optimized by depending on PSO algorithm. The work is divided into two sections. In the 1^st section, the best structure of wavelet neural network controller is selected among different tested structures (by changing the number of neurons in hidden layer). In the 2^nd section, the best wavelet neural network controller is selected among different tested controllers by depending on the type of wavelet filter. The comparing is done by depending on the MSE values. The simulation is done by using MATLAB which reveals a good performance for the proposed control system.

References

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Mobile Robot- Dynamic Model Controlling using Wavelet Network

Index Terms

Computer Science

Networks

Keywords

Mobile robot  dynamic model  wavelet neural network  PSO