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 1st 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 2nd 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

Conference on Automatic Control, Controlo, Coimbra, Portugal, 2010
Mobile Robot- Dynamic Model Controlling using Wavelet Network

**Index Terms**

Computer Science  
Networks

**Keywords**

Mobile robot  
dynamic model  
wavelet neural network  
PSO