

Prediction of clarified water turbidity of Moyog water treatment plant using artificial neural network

Abstract

This study outlines the artificial neural networks application to improve the prediction capability by investigating the effect of data sampling, network type and configuration as well as the inclusion of past data at the neural network input. Multi layered perception and Elman network were used. Validation results using input data based on 5 min and 1 h sampling was compared. It was found that the 1 h sampling yielded better prediction. Different network configurations were also compared and it was observed that although the larger network showed better prediction capability during the training phase, it was the smaller network that demonstrated better prediction in the validation stage. The inclusion of past data into the neural network was also studied. The generalisation degraded as more past data were included. © 2007 Asian Network for Scientific Information.