Continuous Functions Modeling with Artificial Neural Network: An Improvement Technique to Feed the Input-Output Mapping

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Abstract : The artificial neural network is one of the interesting techniques that have been advantageously used to deal with modeling problems. In this study, the computing with artificial neural network (CANN) is proposed. The model is applied to modulate the information processing of one-dimensional task. We aim to integrate a new method which is based on a new coding approach of generating the input-output mapping. The latter is based on increasing the neuron unit in the last layer. Accordingly, to show the efficiency of the approach under study, a comparison is made between the proposed method of generating the input-output set and the conventional method. The results illustrated that the increasing of the neuron units, in the last layer, allows to find the optimal network's parameters that fit with the mapping data. Moreover, it permits to decrease the training time, during the computation process, which avoids the use of computers with high memory usage.