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Evaluation of Artificial intelligent Technique in Prediction of Sediment transport rate in Ajichai River

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Abstract

Due to complexity of erosion and sediment transport phoneme and non accuracy of different sediment transport formulas and sediment rating curves in predicting of transport rate ,application of intelligent meta model systems based on data mining are mentioned for simulation of sediment transport in rivers. The main aim of this research is predicting and simulation of total load transport using data mining approaches. For this purpose, different models consist of dimensional, non dimensional and logarithmic hydraulic parameters are evaluated using FFNN, RBF,

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GRNN and ANFIS data mining approaches. Results show that RBF and GRNN have better capability and workability comparing other Meta models.

Keywords: Sediment load, Artificial intelligent technique, Radial basis function, Ajichai river, Neural network.