

عنوان مقاله:

Quality and quantity of the river parameters modeling using conjunction artificial neural network and wavelet

محل انتشار:

ششمین کنفرانس ملی مدیریت منابع آب ایران (سال: 1395)

تعداد صفحات اصل مقاله: 18

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خلاصه مقاله:

The paper describes the training, validation and application of artificial neural network (ANN) and wavelet models for computing the 11 quality and quantity parameters of the Jajrood River (Iran) in which two ANN models were identified, validated and tested for the computation of parameters in the Jajrood river water. Both the models employed eleven input water quality and quantity variables measured in river water over a period of 40 years each month at two different latyan and roudak stations. The performance of the ANN models was assessed through the coefficient of determination (R^2) (square of the correlation coefficient), root mean square error (RMSE), SSE and bias computed from the measured and model computed values of the dependent variables. The model computed values of 11 parameters by both the ANN models were in close agreement with their respective measured values in the river water. Relative importance and contribution of the input variables to the model output was evaluated through the partitioning approach. The identified ANN models can be used as tools for the computation of water quality and quantity parameters.

کلمات کلیدی:

Artificial neural network, modeling, Correlation coefficient, River

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