

# Wavelet Network Model and Its Application to the Prediction of Hydrology

Wensheng Wang, Jing Ding

Department of Hydrology and Water Resources, Hydraulic School of Sichuan University, Chengdu, Sichuan 610065, China, wangws70@sina.com

**Abstract :**

Based on the multi-time scale and the nonlinear characteristics of the observed time series, a new hybrid model between wavelet analysis and artificial neural network (ANN): wavelet network model, has been suggested. The present model absorbs some merits of wavelet transform and artificial neural network. Case studies, the short and long term prediction of hydrological time series, have been researched. The comparison results revealed that the suggested model could increase the forecasted accuracy and prolong the length time of prediction. The wavelet network model is satisfied. [Nature and Science 2003;1(1):67-71].

**Key Word :**

wavelet analysis; artificial neural network; wavelet network model; prediction of hydrology

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