

WANFIS model for monthly runoff forecasting

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Abstract Wavelet analysis has good time-frequency analysis ability. Artificial Fuzzy Neural Network (ANFIS) is the combination of Artificial Neural Network and fuzzy theory. It can fit complex input and output, linear and nonlinear mapping relations. So it is especially applicable to complex nonlinear hydrological systems. This paper combines their abilities, and establishes the WANFIS model. It uses this model to forecast monthly runoff. The result shows that this model can achieve good results in simulating and predicting monthly runoff.

Key words wavelet analysis; ANFIS; WANFIS; runoff forecasting