



A feed forward neural network model for river flow forecasting

R. Teschl, W. L. Randeu, F. Teschl

Department of Broadband Communications, Graz University of Technology, Austria
(reinhard.teschl@tugraz.at)

This paper presents a neural network model for river flow forecasting. The model has been applied to a small alpine catchment in Austria which is often affected by convective storms leading to flash floods at regular intervals. In addition to rain gauge measurements the model accepts also gridded radar estimates of rainfall as input data. The gapless spatial coverage of the weather radar is important to detect small but intense convective shower cells. The network type used in this study is the feed forward neural network. Networks of this type have already been used to model the rainfall-runoff relationship in the area of interest and showed good performance. The present paper shows that variances in the training method can lead to even better results and that weather radar data exhibit high application potential for hydrological purposes.