

## عنوان مقاله:

Estimation Of Discharge of Baranduzchay River Using Artificial Neural Networks

## محل انتشار:

پانزدهمین کنفرانس دانشجویان عمران سراسر کشور (سال: 1393)

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## نویسندگان:

Redvan Ghasemlounia - *Ph.D. Candidate at Istanbul Technical University, Civil Engineering Faculty, Division of Hydraulics and Water Resources, Istanbul, Turkey*

M.Ali Arabpour - *M.Sc. Student at Tabriz Seraj University, Faculty of Civil Engineering, Department Of Earthquake Engineering, Tabriz*

H.Kerem Cigizoglu - *Professor at Istanbul Technical University, Civil Engineering Faculty, Division of Hydraulics, Istanbul, Turkey*

## خلاصه مقاله:

Flow estimation in rivers, provides important information on a wide range of problems that used for design, management and operation of water resources such as river systems, and dams. The application of artificial neural networks (ANNs) to various aspects of hydrological modeling has undergone much investigation in recent years. The present study aims to utilize an Artificial Neural Network (ANN) to modeling the discharge and precipitation relationship in a river located in Iran. This study also presents the application and comparison of artificial neural networks (ANN) and Multi Linear Regression (MLR) to predict the daily flow discharge of the Baranduzchay River in Iran. The Hashem Abad station of Baranduzchay was considered. The data used in this study are daily discharge and daily precipitation of Hashem Abad station. Three types of artificial neural networks models were used in this study. The estimation methods are Feed Forward Back Propagation (FFBP), Radial Basis Function (RBF) and Generalized Regression (GRNN). Also, Multi Linear Regression (MLR) model was developed using the same input parameters for discharge estimation. The results of ANN and MLR models were compared with measured discharge values to evaluate performance of the developed models. Results of all methods were compared and shown in tables and charts. The results extracted from the comparative study indicated that the artificial neural network method is more appropriate and efficient to predict the river discharge than classical regression model

## کلمات کلیدی:

Artificial Neural Network, Multi Linear Regression, Hashem Abad, Estimation

## لینک ثابت مقاله در پایگاه سیویلیکا:

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