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Katerina Tsakiri* (k.tsakiri@brighton.ac.uk), University of Brighton, Watts Building, Lewes Road, Brighton, Brighton BN25PH, United Kingdom, and **Antonios Marsellos** and **Igor Zurbenko**. *A Time Series Model for the Prediction of Flooding in Water Rivers.*

A time series model is presented for the explanation and prediction of the daily water discharge time series derived by three locations nearby Mohawk River, New York and the county of Kent, United Kingdom during the period of 2005-2013. For the analysis, we use the daily water discharge time series, the daily data of ground water level, and climatic variables. A methodology is used to decompose the time series of all the variables into different components (long, seasonal and short term component). The Kolmogorov-Zurbenko (KZ) filter is used for the decomposition of the time series. The KZ filter which separates the long term variations from the short term variations in a time series provides a simple design and the smallest level of interferences between the scales of a time series. The application of the KZ filter in an example of Schoharie Creek (nearby Mohawk River) has improved the prediction of the water discharge up to 81%. This methodology can be applied for the prediction of flooding of the rivers in multiple sites. (Received September 16, 2014)