Dear Prof. Fengler,

we have decided to predict the flow rate of the river Rhine in Basel using ARMA, ARIMA and GARCH Models. The dataset we use can be found at:

**Predicting the flow rate of the river Rhine in Basel using Time Series Analysis**

The river Rhine, which rises from the Alps and flows into the northern sea, is used as an energy source by many of its neighboring countries. The output of the installed hydroelectric power stations is hard to predict and depends on many factors, such as the flow rate. An accurate prediction allows power suppliers to better plan their energy mix and minimize their costs as well as the use of fossil fuel burning power plants. This paper focuses on the prediction of the flow rate of the river Rhine in Basel. To accomplish this, ARMA, ARIMA and GARCH Time Series Models are applied to the previous data recorded by the measurement station in Basel.