

## **Water balance of the Sava river - Development of algorithm Petton for calibration of Watlab model**

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**Abstract.** The present poster focuses on development of algorithm Petton for automatic calibration of water balance model Watbal. Watbal was used in european UNESCO's project of water balance of the Danube basin. First there is a general description of optimizing methods, then more deeply analysis of Watbal follows. We present Watbal's equations for water balance, which simulate dynamics of elements of hydrological circle. A description of calibration of six Watbal parameters with Excel's Goal-Seek function in combination with method of trials and errors, which is a standard way of calibration of Watbal, is given. Then description of algorithm Petton, written in Matlab, which was developed for faster and efficient calibration inside physicaly reasonable parametric space, follows. For water balance analysis Slovenian part of Sava river basin was chosen and was divided in twelve subbasins. Description of gathering and preparing of hydrological and meteorological data and their quality follows. At the end the results of calibration of Watbal with help of Petton and of standard calibration are compared. On all results basic statistical analysis are done. It is shown that Petton is quick and effective in calibrating Watbal.