**AtmoSwing (v1.4): Analogue Technique Model for Statistical weather forecastING**

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The Analogue Method allows forecasting local meteorological variables of interest (predictand), such as the daily precipitation, on the basis of synoptic variables (predictors). It relies on the fact that similar meteorological influences are likely to result in similar local effects. This statistical relationship is thus based on archives of observed data, and used in order to operationally forecast the coming days, or to evaluate future conditions under a changing climate.

AtmoSwing is an open source software that implements the Analogue Method in a very flexible way, so that different variants can be handled dynamically, by parameterization through XML files. It is made of 3 tools: the Forecaster to perform operational forecasts, the Viewer to display the results, and the Optimizer to establish the relationship between the predictand and predictors.

The Forecaster handles every required processing internally, such as predictors downloading and reading, grid interpolation, analogy sorting, without external scripts or file conversion. The processing of a forecast is extremely lightweight in terms of IT infrastructure; it can indeed run on almost any computer.

The Viewer displays the forecasts in an interactive GIS environment. It contains several layers of syntheses and details in order to provide a quick overview of the potential critical situations in the coming days, as well as the possibility for the user to go into the details of the forecasted predictand and criteria distributions. Several tips coming from the literature are provided in order to help interpreting the forecasts.

The Optimizer integrates the common semi-automatic sequential approach, as well as Monte- Carlo analyses, and a global optimization technique by means of Genetic Algorithms.