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Rainfall Hazards Prevention based on a Local Model Forecasting System

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Rainfall is one of the most important events of human life and society. Some rainfall phenomena like floods or hailstone are a threat to the agriculture, business and even life. However in the meteorological observatories there are methods to detect and alarm about this kind of events, nowadays the prediction techniques based on synoptic measurements need to be improved to achieve medium term feasible forecasts. Any deviation in the measurements or in the model description makes the forecast to diverge in time from the real atmosphere evolution. In this paper the advances in a local rainfall forecasting system based on time series estimation with General Regression Neural Networks are presented. The system is introduced, explaining the measurements, methodology and the current state of the development. The aim of the work is to provide a complementary criteria to the current forecast systems, based on the daily atmosphere observation and tracking over a certain place.