

RainFARM, stochastic rainfall downscaling, and beyond

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In the past two years we have spent some efforts in developing a practical tool for stochastic rainfall downscaling, which we called RainFARM: Rainfall downscaling by a Filtered AutoRegressive Model. In this contribution we briefly review the characteristics of RainFARM and the place it holds in the universe of rainfall stochastic models. We shall then spend some time in discussing how the stochastic models are practically nested into operational meteorological forecasts, and how the possible errors of LAM predictions can affect the whole downscaling procedure. Time allowing, we shall conclude with a perspective on physically-based models for rainfall downscaling, where one attempts at including in the model at least some of the dynamical properties of rainfall fields.