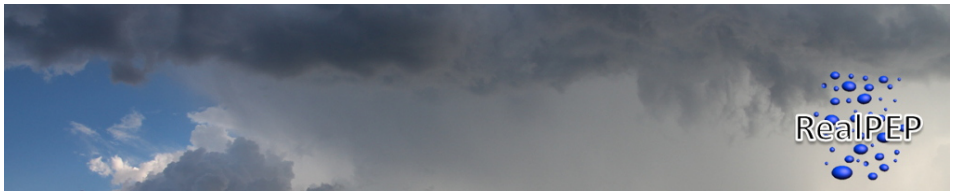

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Improving short range hydrological forecasts by using nowcasting technique and data assimilation in meteorological models

Wednesday, October 7, 2020 10:20 AM (20 minutes)

Forecasting flash floods some hours in advance is
still a challenge, especially in environments made up of many
small catchments, where uncertainties in magnitudo and spatial location of forecast rainfall are generally high. The scope of this work is to exploit both observations and modelling sources to improve the discharge prediction in
small catchments with a lead time of 2–8 h.
We used a nowcasting model and a meteorological where a data assimilation technique is applied with high frequency, to generate rainfall fields which are merged by a blending techinque. These latter are use tu feed a hydrological model and produce streamflow predictions.
Results seem to evidence that the implemented approach is quite promising in order to improve flood forecast

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Session Classification: Flash Flood Prediction