*Forecasting the weather
- ensemble techniques
in probabilistic weather prediction*

Convective-scale ensemble prediction experiments with the AROME model

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Météo-France is developing an ensemble prediction system for operational NWP, using the AROME model at 2.5km resolution over western Europe. The emphasis is on the prediction of heavy precipitation events in the Mediterranean, but the performance of the system is tested on other aspects of fine-scale weather, too.

Computational constraints severely restrict the size of the affordable ensemble. Several aspects of the ensemble setup are being examined, and up to date results and plans will be presented, regarding

- the selection of large scale lateral boundary conditions from a global ensemble
- the perturbation of initial conditions from an AROME ensemble data assimilation system
- the impact of synthetic observations designed to enhance dispersion for events of interest
- the added value of a fine-scale ensemble over other approaches (large-scale ensemble, lagged ensemble, multimodel)
- the potential of stochastic physics and surface conditions.