Ensemble forecasting at ECMWF

Martin Leutbecher, Zied Ben Bouallègue, Simon Lang, Sarah-Jane Lock and Frédéric Vitart

The presentation gives an overview of the generation of initial perturbations and the representation of model uncertainties in ECMWF ensembles. Then, the evolution of skill in both medium-range andextended-range ensemble forecasts in recent years will be discussed.

Research regarding ensemble size and spatial resolution will be presented. In the medium-range, the skill of dual-resolution ensembles has been evaluated. For the extended-range, the skill of lagged forecasts has been quantified. Both methods offer possibilities to increase the effective ensemble size.