Ensemble post-processing for varied use-cases

Rachel Prudden, Niall Robinson, and Alberto Arribas
Met Office Informatics Lab, Exeter, UK

Post-processing of ensemble forecasts aims to calibrate them so that the forecast probabilities are well aligned with the realized distribution. Ideally, this would be achieved without compromising either the sharpness of the forecast, the relationships between variables, or the resolution of the extreme tails. However, in practice there is always some trade-off between these attributes. Post-processing algorithms make this trade-off in different ways; the extent to which it preserves each determines the method's suitability for a particular use-case.

As part of a recent project, we have been using ensemble data to serve several different use-cases ranging from hyperlocal forecasts to national weather warnings. This poster will outline the range of requirements for post-processed data, and how we have been addressing those needs.