

Dr. Andrew C. Lorenc

Andrew Lorenc received a BA in Physics from Oxford University in 1971, and joined the research department of the Met Office in 1972. His first job was to plan and perform Observing System Simulation Experiments (OSSE) to help design the observing network for the First GARP Global Experiment in 1979. This involved building a data assimilation system for a global climate model, since operational NWP at the time was only regional. He was seconded in 1976 to ECMWF, where he designed and built their first operational data assimilation system, based on 3D multivariate statistical interpolation (OI). This system was used for the first global re-analysis, of the FGGE year. Returning to the Met Office in 1980, he had a few years for more fundamental studies, some based on the FGGE data, before again being given the task of developing systems for operational NWP. A new Bayesian quality control of observations and the Analysis Correction system for the Met Office's global and regional models resulted. A year's secondment to NMC in Washington DC in 1986 allowed time for studies of nonlinear data assimilation, before returning to become manager of forecasting research. After a spell leading a project to develop the Met Office's variational assimilation system, he moved back to management as Head of Data Assimilation (and later Ensembles), overseeing the successfully implementation of 3D-Var in 1999, 4D-Var in 2004 and an ensemble forecasting system in 2007. In 2009 he again relinquished the management role to become a Met Office Senior Research Fellow.

He has published 38 papers on data assimilation and related topics, and helped organise several scientific conferences, most recently as Chairman of the International Science Organisation Committee for 5th WMO Symposium on Data Assimilation (Melbourne, Oct 2009). For many years he was a member of the WMO CAS/JSC Working Group on Numerical Experimentation.