

Avviso di Seminario: Giovedì 7 Luglio 2016 ore 15:00

Area di Ricerca CNR Aula 2 - Via Madonna del Piano 10, Sesto Fiorentino, Firenze

Title: Estimating uncertainty with the ECMWF ensembles

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Abstract: One of the main advances in numerical weather prediction of the past 25 years has been the development and operational implementation of ensemble-based approaches to estimate uncertainty in analyses and forecasts. They provide a more complete information than single analysis/forecast since they include an estimate of the uncertainty of the analysis and the forecast states. At ECMWF, this uncertainty estimation is given by four key components of the Integrated Forecasting System (IFS). At initial time, the high-resolution 4-dimensional variational assimilation (4DV) and the lower-resolution Ensemble of Data Assimilations (EDA) provide a range of possible initial states. In forecast mode, the high-resolution forecast (HRES) and the ensemble of lower resolution forecasts (ENS) provide a range of possible future states and their uncertainties up to 46 days. For longer time ranges, the seasonal ensemble (S4) provides them for up to 7 months (13 months every quarter). In this talk, the current status of 4DV, EDA, HRES, ENS and S4 and our plans to further develop them will be presented.

Short Bio: Dr Roberto Buizza, European Centre for Medium-Range Weather Forecasts, (ECMWF), Reading (UK) - Research Department - <http://www.ecmwf.int/en/staff/roberto-buizza>

- 1991-to date: ECMWF
 - Since Jan 2016: Lead Scientist, Research Dept.; leading and coordinating R&D, with a focus on predictability, Earth-system modelling and data-assimilation; member of the ECMWF Senior Management Team and responsible for 2 of ECMWF 8 strategic objectives (Forecast System Development, and Partnership);
 - 2011-2015: Head of Predictability Division, Research Dept.; responsible for the development of the ECMWF coupled ensembles and of marine data assimilation and modelling; member of ECMWF Senior Management Team; coordinator of the European project ERA-CLIM2.
 - 2009-2010: Head of the Predictability and Diagnostic Section.
- 1987-1991: Centro di Ricerca Termica e Nucleare (CRTN/ENEL).