National Centre for Medium Range Weather Forecasting (NCMRWF)
Ministry of Earth Sciences (MoES)
Government of India

Press Release

International Conference on
'Ensemble Methods in Modelling and Data Assimilation' (EMMDA)
24-26 February 2020

Although remarkable success have been achieved in improving forecast skill by employing state of the art numerical prediction systems and adopting latest data assimilation techniques, it is well known that some amount of uncertainty associated with numerical weather prediction is inevitable. In order to quantify the forecast uncertainty, leading Weather forecasting centres of the world including India have developed 'Ensemble Prediction System' (EPS) which provides probabilistic forecasting of weather. In an EPS, a number of similar models, called the ensemble members, are run from slightly different initial conditions. It requires high computational resources and in turn provides the flow dependent forecast uncertainty in terms of probability. The probabilistic forecasts help the end users in making decisions and plan their actions suitably. The forecasts from high resolution global and regional EPS provide more accurate probabilistic forecasts of extreme weather events and help the planners and administrators in taking timely actions. India has recently operationally implemented two global EPS which have highest resolution in the world and also a regional EPS of horizontal resolution 4km which covers the Indian region. A well-coordinated collaborative research and development work between national and international centres are further required for progressively improving the skill of EPS.

In order to provide a platform for discussions and deliberations on the present status, future prospects and optimum use of EPS, an international conference on "Ensemble Methods in Modelling and Data Assimilation (EMMDA)" is being organised by NCMRWF,MoES during 24-26 February 2020 at NCMRWF, Noida, India. The major themes of the conference are:

- Ensemble methods in Global Weather Prediction
- Ensemble methods in Data Assimilation
- Ensemble methods in Monthly and Seasonal Forecasting
- Convection Permitting Ensemble Prediction Systems
- Verification of Ensemble weather forecasts
- Applications of Ensemble weather forecasts

Leading International experts from ECMWF of EU, Met Office of UK, NOAA of USA, KMA of South Korea, BoM of Australia, NCAR of USA, University of Maryland of USA, Reading University of UK, NIWA of New Zealand, KAUST of Saudi Arabia, TMD of Thailand will present papers along with distinguished Indian scientists from different lead organizations on latest developments in the field of ensemble data assimilation and modelling. About twenty young scientists and researchers will present their research outcomes. Besides them about 100 participants which include forecasters, stake holder from various sectors and young research scholars will attend this conference.

The latest techniques used in Data Assimilation, Ensemble Methods, and use of Probabilistic Forecasts for developing new applications from Ensemble Products will be discussed. The discussions will lead to development of newer algorithms and will be useful for societal applications related to weather/climate.

This international conference on EMDDA is being inaugurated by Honourable Dr. Harsh Vardhan, Union Minister for Health and Family Welfare, Science and Technology, Earth Sciences.
