

10.06.2007

Annual IMO Prize awarded to WCRP Scientist Dr Shukla

The Executive Council of the World Meteorological Organization awarded Dr Jagdish Shukla with the 52nd International Meteorological Organization (IMO) Prize at its annual meeting held in Geneva in May 2007.



Distinguished Professor and Chair of the Department of Climate Dynamics in the College of Science, George Mason University, Maryland, USA, Dr Shukla is also president of the Institute of Global Environment and Society and founder of the Center for Ocean-Land-Atmosphere Studies (COLA), a research center devoted to an improved understanding of climate variability and predictability.

Dr Shukla has been associated to the World Climate Research Programme (WCRP) since its inception 26 years ago. At that time, Dr Shukla was involved in research on coupled ocean-atmosphere models that could already skilfully predict one of the most important boundary forcings, namely the sea-surface temperature. The rapid scientific developments led to one of the most successful international research programmes under the leadership of WCRP, the first coupled atmosphere-ocean initiative named the Tropical Ocean and Global Atmosphere (TOGA) project. TOGA began in 1984 and led to major breakthroughs in operational seasonal forecasting because it laid the physical basis for understanding and predicting world-wide anomalies in the global atmospheric circulation and the temperature and precipitation patterns linked to El Niño.

As TOGA came to its end in 1994, Dr Shukla supported the proposal of extending TOGA-research from the tropical oceans to the global oceans, and to include land-surface processes. The Global Ocean Atmosphere Land System (GOALS) programme was born in the USA, and the establishment of WCRP's core project on Climate Variability and Predictability (CLIVAR) followed a year later in 1995.

Monsoons, the El Niño Southern Oscillation and other global coupled atmosphere-ocean phenomena are investigated by CLIVAR on seasonal, interannual, decadal and centennial timescales. CLIVAR further examines the detection and attribution of anthropogenic climate change based on high quality climatic records. Dr Shukla served as a member of the CLIVAR Monsoon panel (1996), the TOGA Numerical Experimentation Group (1995), the PAGES/CLIVAR Working Group (1995), the US CLIVAR Scientific Steering Committee for Climate Variability (1998), the US CLIVAR Seasonal-Interannual Modelling Panel (1999), and US CLIVAR Asian Australian Monsoon Working Group (2000).

Since 2001, Dr Shukla has been a member of the WCRP Joint Scientific Committee (JSC), and Chair of the WCRP Modelling Panel (WMP), which promotes, coordinates and integrates modelling activities. Scientific contributions include research on monsoon dynamics, deforestation, desertification, tropical predictability and climate variability.

'Meteorology today offers unprecedented opportunities for a young person joining the field of weather and climate forecasting including making scientific breakthroughs and helping humanity', says Dr Shukla in an interview conducted by the World Meteorological Organization in October 2005. 'Enormous amounts of data are available for analysis as well as highly sophisticated models and very fast computers for understanding and predicting weather and climate. But there are unsolved problems of understanding and prediction, especially with regard to the behaviour of the fully coupled ocean-land-atmosphere system, and there remains a large gap between what is potentially predictable and what we are able to predict today'.

In his home country of India, Dr Shukla has been instrumental in creating weather and climate research centers in India. When India received the first supercomputer from the USA under special agreement for monsoon forecasting, he was invited by India to be the scientific leader in establishing the National Center for Medium Range Weather Forecasting (NCMRWF) in New Delhi. He helped recruit and train the scientific staff, and implemented a global model to make weather forecasts for India. Dr Shukla has also established research institutions in Brazil and Italy.

Dr Shukla's vision for the next 10 to 20 years is: 'we need to invest in people, high-resolution models and computing capacity if we are to reap the benefits of scientific and technological advances'.

In 2005, Dr Shukla received the Carl-Gustaf Rossby Research Medal from the American Meteorological Society, and in 2001 the first international Sir Gilbert Walker Gold Medal from the Indian Meteorological Society.

The IMO Prize is awarded annually for outstanding work in the field of meteorology and is considered the highest international award in the field. Previous winners have included well-known scientists from around the globe. The Prize winner is selected from nominations of Ministers of Foreign Affairs of the WMO member states. The Prize includes a gold medal and a monetary award.



The previous (51st) IMO Prize was awarded to Professor Olof Lennart Bengtsson from the Stockholm University in Sweden who also has strong ties to the World Climate Research Programme, in particular to the CLIVAR project and various modelling groups. Dr Bengtsson was Chair of the JSC/CLIVAR Working Group on Coupled Modelling (1995-2000) and of the Joint Scientific Committee of the Working Group on Numerical Experimentation (1978-1985).