

Jayakumar, NCMRWF

Dr. Jayakumar has played a key role in adapting the recent NCMRWF Unified Modeling system from the UK Met Office. He has led the development of NCMRWF version of seamless prediction system, enabling convection permitted scale to urban resolution models. His work on Indian Monsoon as a visiting scientist at the University of Reading in 2016 has further enriched his expertise. He is also the Principal Investigator (PI) from India for the Weather and Climate Science for Service Partnership India-UK (WCSSP-India) sub-km modeling project under the Newton-Bhabha fund. Notably, he has developed the DM-Chem model, a high-resolution setup for PM_{2.5} and visibility forecasts for Delhi and NCR regions. He serves as the Co-PI of the Monsoon Mission project phase III with CAOS, IISc, focusing on surface energy balance and boundary layer characteristics in Monsoon Mission models. He has also contributed to various international research projects such as the Belmont Forum/JPI-Climate BITMAP, INCOMPASS project and DFID/NERC LANDSLIP. Recognizing his significant contributions, Dr. Jayakumar was awarded the Certificate of Merit by the Ministry of Earth Sciences in 2018 for his outstanding work in atmospheric science and technology. He has published over 50 peer-reviewed research papers, 4 book chapters, and 8 technical reports. Some of his major research contributions include the development of visibility parameterization in the high-resolution Delhi model for fog forecasting, the introduction of lightning forecast using a revised lightning formulation, and his involvement in the development of the urban canopy scheme based on Delhi's urban morphology data.