

## Dr. Pulak Guhathakurta



Dr. Pulak Guhathakurta did his Ph.D in Applied Mathematics from Calcutta University. He has done M.Sc. and M.Phil. in Applied Mathematics with specialization in computer science and cybernetics from Calcutta University. He qualified NET and was CSIR Research Fellow during 1988-1992 at Calcutta University. He joined India Meteorological Department as Meteorologist in July 1992 at Pune. At the initial stage of his career he worked at National Data Centre, research division and long-range forecasting section. He has significantly contributed to bring out the first issue of Climate Diagnostic Bulletin of India (March 1996) and starting the National Climate Centre at IMD Pune. Since then he is involved with the activities of National Climate Centre. He has used Artificial Neural Network technique in developing empirical models for long range prediction and in other applications of weather and climate services. During the period 1998-2001 he was at Regional Meteorological Centre, Guwahati and worked in operational weather forecasting, FMO. Since 2001 he is working in different capacities at Climate Research and services. Pune. He has significant contributed in application of climate services to various sectors like hydrological, agricultural etc. He has generated number of rainfall data products for the first time in IMD like monthly and daily long period rainfall data series for different spatial scales which are being used in various activities like climate change and variability, forecasting, agricultural activities etc within and outside IMD. He is pioneer to initiate weekly district wise drought monitoring and prediction using the indices like Standardized Precipitation Index and Standardized Precipitation Evapotranspiration Index at IMD which are being used for national level agricultural advisory services by IMD as well as all State Government disaster management authorities and Agricultural ministry for drought monitoring of India. Since last year he has also started preparation of weekly rainfall and volume of water monitoring and prediction for 101 river basins of India using IMD-IITM ERF. All these maps are prepared every week and uploaded in IMD Pune website regularly.

As a part of enhancing climate services he has taken lead role to develop a climate information page at IMD Pune website to provide various climate information of different cities as well as pan India, climate of smart cities etc. He has also taken lead role in preparation and publications on observed rainfall changes and variabilities of 29 states for submission to Parliamentary Standing Committee (PSC) in this year which are helpful for the government agencies for assessment and action on the impact of climate changes on water management, agricultures etc. He has vast experiences of research in the field of numerical solution

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of nonlinear differential & integral equations, climate change, extremes & variability, application of ANN in weather & climate prediction, hydrometeorology and drought analysis and prediction. He has more than 45 research papers published in various international and national journals. One paper published in Journal of Earth System Science of Springer is considered as one of the top 5 cited research papers. He has reviewed various research papers of international scientific journals like Journal of Earth System Science, Theoretical and Applied Climatology, Climatic Change, International Journal of Climatology, Meteorology and Atmospheric Physics, Computers & Geosciences, Geophysical Research Letters etc. He is a recognized teacher for guiding M. Sc and Ph. D students of Pune University and Chhattisgarh Swami Vivekananda Technical University. Two students already completed Ph.D under him and several students completed M.Sc./MCA projects. Presently 3 students are pursuing Ph.D. Dr. Guhathakurta has worked with various Expert panels of World Meteorological Organization (WMO) on Climate extremes like tasked with evaluating the potential Western Hemispheric record: Heaviest Hailstone during 2011, the global Highest Average Annual Precipitation extreme of Puerto Lopez in Colombia and global 48-Hour (two-day) Greatest Precipitation extreme of Cherrapunji in India. Based on his investigations, WMO in Press Release dated April 4, 2014 declared 48 hour rainfall of Cherrapunji, India on 15-16 June, 1995 as world highest 48 hour rainfall and also acknowledged the contribution of IMD for the investigation. Presently he is also member of five WMO Expert Groups. He is also in the Panel/expert working group on Hydrometry WRD 27 of Bureau of Indian Standards. Also involved as nodal person from IMD, MOES in “Cooperation in the area of data access and use of Sentinel data of the European Commission Copernicus programme”.

Dr. Pulak Guhathakurta is awarded **Certificate of Merit** for his outstanding contribution in the field of Atmospheric Sciences.