

INDIAN INSTITUTE OF TROPICAL METEOROLOGY, PUNE
57th FOUNDATION DAY, 17th NOVEMBER 2018
VENUE - MEGHDOOT COMPLEX, IITM, PUNE

PROGRAMME

0930-0940 - Arrival of *Guests*

0940-0945 - Welcome & Presentation of bouquets

0945-0950 - Invocation & Lighting of Lamp

0950-1000 - Welcome address by Director, **Prof. Ravi Nanjundiah**

1000-1015 - Brief Introduction of Chief Guest, **Dr. Vijay Bhatkar**, Chancellor, Nalanda University and Guest of Honor, **Dr. Satish R. Shetye**, NIO Director (Retd) and Former Vice Chancellor, Goa University and presentation of Mementos to Dignitaries

1015-1035 - Inaugural address by Chief Guest **Dr. Vijay P. Bhatkar**

1035-1055 - Presentation of Awards and Release of Mobile App "DAMINI-Lightning Location Network"

1055-1100 -Vote of thanks

1100-1130 - High Tea

1130-1215 - IITM Foundation Day lecture by **Dr. Satish Shetye** on "The role of topography in defining the behavior of the Indian Summer Monsoon"

1215-1240 - Golden Jubilee Award lecture-1 by **Dr. G. Pandithurai** on "Role of atmospheric aerosols on cloud microphysics and precipitation"

1240-1305 - Golden Jubilee Award lecture-2 by **Dr. Thara Prabhakaran** on "Progress on mixed phase cloud processes from CAIPEEX"

1305-1330 - Silver Jubilee Award Lecture by **Dr. Milind Mujumdar** on "Recent trends and tele-connections among South and East Asian summer monsoons in a warming environment"

1330-1430 - Lunch

1430-1450- Best student paper Award-1 **Dr. Gayatri Kulkarni** "Aerosol-cloud interactions in deep convective clouds over the Indian Peninsula using spectral (bin) microphysics" (J. Atmos. Sci., 2017)

1450-1510- Best student paper Award-2 **Shri. Utsav Bhowmik** "Characteristics of convective clouds over the Western Ghats derived from Weather radar observations" (JGR, 2017)

1510- 1630 - Tea and Interactions

1630 - 1900 - Cultural Program and High Tea

IITM Foundation Day Lecture by Guest-of-Honor

The role of topography in defining the behaviour of the Indian Summer Monsoon

Dr. Satish R. Shetye

satishrshetye@gmail.com

The Indian Summer Monsoon (ISM) is a consequence of the migration of the Inter-Tropical Convergence Zone (ITCZ) to the region of the North Indian Ocean and its surroundings. Modification of ITCZ accompanies the migration. The modification and the resulting distribution of precipitation can be linked to the land topography of the region with the ocean often playing an intermediary role. The talk highlights five such links. First, the East African Mountains make a cross-equatorial jet of surface winds possible by providing a solid "western boundary". After crossing the equator, the jet turns eastward. As a result, unlike the ITCZ elsewhere which has a minimum in surface winds (the doldrums), the ITCZ over the Bay of Bengal is not a location of surface wind minimum. Second, the oceanic response to the cross-equatorial jet leads to cooling of the western Arabian Sea and a break in ITCZ, the only persistent break anywhere. Third, the topographic slope provided by the Sahyadris (Western Ghats), the Arakans and the foothills of the Himalayas produce a local high in precipitation due to the topographic uplift of low-level winds. Fourth, the topographic slope of the Indian peninsular region ensures that most of the river runoff from the subcontinent flows into the Bay of Bengal reducing the sea surface salinity in the bay and increasing near surface salinity gradient. The high gradient is, at least partially, responsible for keeping the Bay of Bengal warm enough to sustain atmospheric convection. Fifth, the Himalayan mountains serve as a wall that restricts movement of moisture in the meridional direction, thus helping to support the precipitation during the ISM.