INDIAN INSTITUTE OF TROPICAL METEOROLOGY, PUNE
55th FOUNDATION DAY, 17th NOVEMBER 2016
VENUE – MEGHDOOT COMPLEX, IITM, PUNE

PROGRAM

0930 - 0940 - Welcome and Presentation of Bouquets

0940 – 0945 - Invocation & Lighting of Lamp

0945 – 0955 - Welcome Address by Director, Dr. R. Krishnan

0955 – 1000 - Brief Introduction of the Chief Guest, Prof. S.K. Dube, Vice Chancellor, Amity University, Jaipur & the Guest of Honour, Prof. P.C. Joshi, Retired Scientist, SAC, Ahmedabad

1000 – 1025 - Inaugural Address by Chief Guest Prof. S.K. Dube

1025 – 1035 - Presentation of Awards

1035 – 1040 - Presentation of Mementos to Dignitaries

1040 – 1045 - Vote of Thanks

1045 – 1115 - High Tea

1115 – 1200 - IITM Foundation Day Lecture by Prof. P.C. Joshi

1200 – 1230 – Golden Jubilee Award Lecture by Dr. A.K. Sahai

1230 – 1310 – Golden Jubilee Award & Silver Jubilee Award Lectures by Dr. C. Gnanaseelan

1310 – 1330 - Best Student Paper Award Lecture by Ms. P. Priya

1330 – 1430 - Lunch

1430 – 1530 – Poster Viewing & Tea

1530 – 1630 - Prof. P. R. Pisharoty Distinguished Lecture by Prof. C.K. Shum

(Jointly organized by IITM and IMSP)

1630 – 1830 - Cultural Program and High Tea

[PTO]

## Abstract of Prof. P. R. Pisharoty Distinguished Lecture by Prof. Shum

*The potential for accelerated sea-level rise under anthropogenic warming is a significant societal problem, in particular in world's coastal deltaic regions where about half of the world's population or ~3 billion people reside. Improved estimates of sea-level rise and quantifying the contributing geophysical process remain a complex and challenging interdisciplinary research problem. These geophysical processes include ice-sheet/glacier ablations, steric sea-level, solid Earth uplift or subsidence due to global isostatic adjustment (GIA), tectonics, sediment loading or anthropogenic causes, hydrologic imbalance, and human processes including water retention in reservoirs and aquifer extraction. The 2013 IPCC AR5 concluded that the observed and explained geophysical causes of global geocentric sea-level rise, 1993–2010, are closer towards closure. However, the discrepancy reveals that circa 12.5→37.5% of the observed sea-level rise remains unexplained. This relatively large discrepancy is primarily attributable to the wide range of estimates of respective contributions of Greenland and Antarctic ice-sheets and mountain/peripheral glaciers to sea-level rise. Estimates of the last century and early 21st century sea-level rise depend primarily on the fidelity of long-term tide gauges. Most studies or the IPCC studies assume that GIA is the only process governing solid Earth (land, islands and sea-floor) uplift or subsidence arguably may cause the estimated sea level trend to be biased. Understanding and quantifying the natural (GIA, tectonic), and anthropogenic (sediment compaction/load and groundwater extraction) processes governing solid Earth uplift/subsidence at the regional and local scales are critical towards addressing coastal vulnerability due to relative sea-level rise hazards, including world's deltaic regions. Here we provide new estimates of geocentric sea-level rise while separating vertical land motion at global tide gauge datum, via a joint adjustment of vertical motion and reconstruction of sea-level trends over the last six decades, 1950–2012. The resulting vertical motion is validated using global GPS tide gauge data sets, and the reconstructed sea-level is compared with independent tide gauge records, indicating good agreement. Finally, an updated tabulation of the sea-level budget, or the reconciliation of observed and explained contributing sources of global sea-level rise, is presented.*