



## **Variability of the South Asian monsoon during 1901-2004**

Venkat Krishnamurthy (1,2)

(1) Institute of Global Environment and Society, Center for Ocean-Land-Atmosphere Studies, Calverton, United States (krishna@cola.iges.org), (2) Department of Atmospheric, Oceanic and Earth Sciences, George Mason University, Fairfax, United States

The variability of monsoon rainfall over India at various time scales during 1901-2004 is discussed. Using daily gridded rainfall data, the monsoon variability is decomposed into intraseasonal oscillations at different periods and seasonally persisting modes that are related to El Nino-Southern Oscillation (ENSO) and Indian Ocean Dipole (IOD). The decadal modulation of these monsoon rainfall modes and their relation with the sea surface temperature (SST) are discussed. The variability of the low pressure systems (LPS) formed over the Bay of Bengal and central India during the same period is also presented. The LPSs consist of rain-bearing systems such as lows and depressions which have also gone through decadal modulation. The relation among rainfall, LPS and SST during 1901-2004 shows that they vary in a coherent manner at low-frequency. The trends during the recent decades in the monsoon variability are also shown.