

**THE CHINESE UNIVERSITY OF HONG KONG**

*Department of Statistics*

will present a seminar entitled

**Estimating Rainfall from Space**

by

**Professor Long S. Chiu**  
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**Chinese University of Hong Kong.**

on

**Tuesday, 24 April 2007**

**2:00 pm – 3:00 pm**

in

**Lady Shaw Building C2**  
**The Chinese University of Hong Kong**

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**Abstract:**

Rainfall is crucial for sustaining life and water related disasters such as floods and droughts have brought economic losses and suffering to mankind. The latent heat released during the process of precipitation is also a major forcing for atmospheric circulations. The lack of gauge networks, especially over the oceans, points to remote sensing for global monitoring.

As part of the World Climate Research Program/Global Energy and Water Experiment (WCRP/GEWEX), the Global Precipitation Climatology Project (GPCP) is established to develop a global rainfall data set which combines ground based and satellite observations from geosynchronous and polar orbiting satellites. Analysis of the GPCP rainfall shows an increasing trend in oceanic rainfall while no obvious trends are observed over land. In this talk, I will describe a technique for estimating rainfall from microwave radiometry over the oceans. The technique entails the use of microwave radiometry and a physical model to relate observed microwave radiance to the rain rate. To mitigate the inadequate space and temporal sampling, the rain rate distributions are constrained to follow a mixed lognormal distribution. Interannual variations and trends in the oceanic monthly data set will be described and statistical issues related to monthly rainfall estimation and data set merging will be discussed.

**All are Welcome**