臺灣大學數學系專題演講
Inverse Problems Seminar

演講者：Professor Cheng-Chien Liu (Director, Global Earth Observation and Data Analysis Center and Department of Earth Sciences, National Cheng Kung University)

講　題：Solving the radiative transfer equation for remote sensing of ocean color

時　間：2011年10月12(星期三) 14:10-15:10

地　點：臺灣大學天數館305室

摘　要：

The light propagating upwards from beneath the surface contains information about the material dissolved and suspended in the water. Based on this principle, the technology of remote sensing has provided an avenue, by which the synoptic observation of ocean color can be made from space. Retrieving information from these radiative signals of water color plays a key role in the success of spaceborne ocean color missions. In principle, this is an inverse problem of hydrologic optics governed by the radiative transfer equation (RTE): given radiometric measurements from space, determine the concentration and characteristics of water constituents. The RTE, however, is an integral-differential equation that is currently solved by numerical approaches. There are certainly some limitations of numerical approaches. In this paper, we will present the related works in (1) validating biogeochemical models, (2) simulating the underwater light field, and (3) retrieving water constituents from remote sensing of ocean color. Some discussions and our research strategy for the future works would be given, and hopefully, more collaboration with mathematicians could be initiated after this workshop.

主辦人：王振男 http://www.math.ntu.edu.tw/~jnwang/ipseminar.htm