

Liu Bie Ju Centre for Mathematical Sciences  
City University of Hong Kong

## Mathematical Analysis and its Applications Colloquium

Organized by Prof. Hui-Hui Dai and Dr. Dan Dai

### Near-Field Imaging of Rough Surfaces

by

**Professor Peijun Li**

**Department of Mathematics, Purdue University, USA**

**Date : Oct 21, 2014 (Tuesday)**

**Time : 4:30 pm to 5:30 pm**

**Venue: Room B6605 (College Conference Room)  
Blue Zone, Level 6, Academic 1 (AC1)  
City University of Hong Kong**

#### **ABSTRACT:**

In this talk, our recent progress on inverse surface scattering problems will be discussed. I will present new approaches to achieve subwavelength resolution for the inverse problems. The method requires only a single incident field and is realized by using the fast Fourier transform. The error estimates of the solution for the model equation will be addressed. I will also highlight ongoing projects in rough surface imaging, random medium imaging, and near-field optics modeling.

Light refreshments will be provided at Room B6605 before the colloquium from 4:00 pm to 4:30 pm. Please come and join us!

**\*\* All interested are welcome \*\***

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