

THE UNIVERSITY



OF HONG KONG

Department of Mathematics

## Numerical Mathematics and Applied Analysis Group Seminar (NMAA)

September 5, 2013 (Thursday), 2:00 - 3:30pm  
Rm 309, Run Run Shaw Bldg., HKU

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**Ms. Xiaoqing CHENG**

Department of Mathematics, HKU

### *Parameterization of contribution of sugar unit and glycosidic linkage to elution volumes of PA-glycans on Amide-Silica column*

Abstract: In this talk, we aim at parameterizing the contribution of sugar unit and glycosidic linkage to elution volumes of PA-glycans on Amide-silica column. The main method employed here is the multiple linear regression method. Since the existing models cannot explain the difference of the elution volume for the same monosaccharide, we have to propose a new model to explain the contribution of each component, which contains each kind of monosaccharide and the glycosidic linkage. Finally, we use correlation coefficient to test the proposed model with two data sets and we find that the new model is better.

**Ms. Jia-wen GU**

Department of Mathematics, HKU

### *On Modeling Economic Default Time : A Reduced-Form Model Approach*

Abstract: In the aftermath of the global financial crisis, much attention has been paid to investigating the appropriate-ness of the current practice of default risk modeling in banking, finance and insurance industries. A recent empirical study by Guo et al. (2008) shows that the time difference between the economic and recorded default dates has a significant impact on recovery rate estimates. Guo et al. (2011) develop a theoretical structural firm asset value model for a firm default process that embeds the distinction of these two default times. To be more consistent with the practice, in this talk, we assume the market participants cannot observe the firm asset value directly and developed a reduced-form model to characterize the economic and recorded default times. We derive the probability distribution of these two default times. The numerical study on the difference between these two shows that our proposed model can both capture the features and fit the empirical data.

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*All are welcome*

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