



Department of Mathematics  
The Chinese University of Hong Kong

數學系  
香港中文大學

Phone: (852) 3943 7988 • Fax: (852) 2603 5154 • Email: [dept@math.cuhk.edu.hk](mailto:dept@math.cuhk.edu.hk) (Math. Dept.)  
Room 220, Lady Shaw Building, The Chinese University of Hong Kong, Shatin, N.T., Hong Kong

# Seminar

## *Gamblet based multigrid and its applications to eigenvalue problems*

*Professor Lei Zhang  
Shanghai Jiaotong University*

### Abstract

Gamblet is a hierarchy of nested spaces, which can be interpreted as an operator adapted wavelet spaces. We will show that for elliptic equation with arbitrary  $L^\infty$  coefficients, the convergence of multigrid method for boundary value problems with Gamblet coarse spaces. Furthermore, we will construct the corresponding multigrid method for eigenvalue problems and show its convergence.

Date: 25 April 2018 (Wednesday)  
Time: 11:00am – 12:00noon  
Venue: Room 222, Lady Shaw Building,  
The Chinese University of Hong Kong, Shatin

*All are Welcome*