



Department of Mathematics  
The Chinese University of Hong Kong

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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

## *Sparse Domination and the $A_2$ Theorem*

*Mr. Joris Roos*  
*University of Bonn*

### Abstract

Domination by sparse operators is a simple but powerful technique for proving weighted singular integral estimates that was recently developed by A. Lerner (2012, 2016) and M. Lacey (2015) and further extended by many other people. Lerner and Lacey have given short proofs of the  $A_2$  theorem (first proven in full by T. Hytönen in 2010) using sparse operators. The  $A_2$  theorem asserts the validity of certain natural weighted  $L^2$  inequalities for Calderón-Zygmund operators. The talk will be a brief introduction to these topics. No previous knowledge is assumed.

**Date :** July 29, 2016 (Friday)  
**Time :** 3:00p.m. – 4:00p.m.  
**Venue :** Room 219, Lady Shaw Building,  
The Chinese University of Hong Kong

*All are Welcome*