### THE UNIVERSITY



### OF HONG KONG

# Institute of Mathematical Research Department of Mathematics

## **GEOMETRY SEMINAR**

# Pseudo-differential calculus defined by groupoids

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#### **Abstract**

In this talk, I shall introduce the notion of Lie groupoids, and explain how they are used to define interesting classes of pseudo-differential operators that are adapted to singular objects. The discussion would be focused on examples, most importantly that of manifolds with boundary and the Bruhat sphere. In particular, the Fredholmness problem and index theory of these examples will be outlined.

Date: October 14, 2010 (Thursday)

Time: 3:00 – 4:00pm

Place: Room 210, Run Run Shaw Bldg., HKU

All are welcome