

Department of Mathematics  
City University of Hong Kong

## Colloquium

Organised by Prof. Tong YANG and Dr Xianpeng HU

### Expansion of an inviscid gas in vacuum

by

Professor Denis Serre  
Unite de Mathematiques Pures et Appliquees (UMPA),  
France

#### ***Abstract :***

We discuss the way a singularity must develop at the boundary when a gas expands in vacuum. We show that there are integral obstructions to the global existence of flows that are smooth at the boundary. A surprising fact is that eternal flows without boundary singularity exist in even space dimension, but don't exist in odd space dimension.

**Date:** 1 March 2018 (Thursday)  
**Time:** 4:30 – 5:30pm  
**Venue:** 1310, Li Dak Sum Yip Yio Chin Academic Building  
(AC2)  
City University of Hong Kong

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