

THE UNIVERSITY



OF HONG KONG

*Institute of Mathematical Research  
Department of Mathematics*

## **Analysis Seminar**

### **A survey on decoupling inequalities**

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#### **Abstract**

In the past few years, Bourgain, Demeter and Guth developed a very powerful machinery in harmonic analysis, now known as decoupling inequalities. These inequalities capture certain “interference patterns” that arise, when one adds up functions whose Fourier transforms are supported in different regions of a curved submanifold of  $\mathbb{R}^n$ . They made possible breakthroughs in many areas of mathematics, from PDEs to analytic number theory. In this talk, we will attempt to give a brief survey of this rapidly growing area.

Date: January 31, 2018 (Wednesday)

Time: 4:30 – 5:30pm

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

*All are welcome*