



The Hong Kong University of Science and Technology

Department of Mathematics

Seminar on Pure Mathematics

Mobius function, inversion, and beyond

By

Prof. Beifang CHEN

Hong Kong University of Science and Technology

Abstract

The number theoretic Möbius function is given by $\mu(1)=1$, $\mu(n)=(-1)^r$ if n is a product of distinct primes, and equal to zero otherwise. The partial order of divisibility of positive integers is crucial in the Möbius inversion. This talk is quickly to review the classical Möbius function and Möbius inversion, and then to introduce the Möbius function and inversion on locally finite partially ordered sets. Various applications to hyperplane arrangement, vector subspace poset, simplicial (CW) complex, Coxeter group, and Boolean function satisfiability, etc., will be discussed.

Date: Wednesday, 21 March 2018

Time: 5:00p.m. - 6:00p.m.

**Venue: Room 5510, Academic Building
(near Lifts 25 & 26), HKUST**

All are welcome!