THE UNIVERSITY　　　　　　**OF HONG KONG**

Institute of Mathematical Research
Department of Mathematics

LECTURE SERIES

Zeta functions in number theory and combinatorics

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Abstract

Generally speaking, a zeta function is a counting function. In number theory, the Dedekind zeta function counts the integral ideals in a number field, the zeta function of a smooth variety over a finite field counts rational points over finite extensions of the base field, and the Selberg zeta function counts closed geodesics in a compact Riemann surface. A combinatorial zeta function counts closed geodesics in a finite simplicial complex. We shall study combinatorial zeta functions for simplicial complexes arising as finite quotients of buildings of low rank Lie groups over p-adic fields. They bear a lot of similarities and close connections with zeta functions in number theory.

Lecture 1:	May 18, 2017 (Thursday)　10:00 – 11:30am
Lecture 2:	May 19, 2017 (Friday)　　10:00 – 11:30am
Lecture 3:	May 26, 2017 (Friday)　　10:00 – 11:30am
To be continued	

Room 210, Run Run Shaw Bldg., HKU

All are welcome