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 4:	June 7, 2017 (Wednesday)	4:00 – 5:30pm
Lecture 5:	June 13, 2017 (Tuesday)	10:00 – 11:30am
Lecture 6:	June 14, 2017 (Wednesday)	10:00 – 11:30am
Lecture 7:	June 15, 2017 (Thursday)	10:00 – 11:30am
Lecture 8:	June 21, 2017 (Wednesday)	10:00 – 11:30am
Lecture 9:	June 22, 2017 (Thursday)	10:00 – 11:30am
Lecture 10:	June 27, 2017 (Tuesday)	10:00 – 11:30am
Lecture 11:	June 28, 2017 (Wednesday)	10:00 – 11:30am
Lecture 12:	July 4, 2017 (Tuesday)	10:00 – 11:30am
Lecture 13:	July 5, 2017 (Wednesday)	10:00 – 11:30am

Room 210, Run Run Shaw Bldg., HKU

All are welcome