THE UNIVERSITY　　　**OF HONG KONG**

Department of Mathematics

C O L L O Q U I U M

Automorphic forms and Voronoi formulas

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Abstract

Automorphic forms are well-behaved functions on a group (such as $GL(n, R)$) which are invariant under the action of a discrete arithmetic subgroup (such as $SL(n, Z)$). They encode vital arithmetic information. Voronoi formulas are Poisson-style summation formulas for automorphic forms. They have been powerful tools in analytic number theory for a long time (with applications to the divisor problem, the circle problem, subconvexity of L-functions, etc). I will talk about Voronoi formulas and their recent development and applications. The talk will start with the Ramanujan tau-function and its related conjectures.

Date:	**March 6, 2018 (Tuesday)**
Time:	**4:00 – 5:00pm**
Venue:	**Room 210, Run Run Shaw Bldg., HKU**

All are welcome