



## GEOMETRY SEMINAR

### The role of diminutive K-types in the representation theory of real and p-adic reductive groups

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#### Abstract

Harish Chandra's early work reduced problems of analysis about infinite dimensional representations of a reductive group  $G$  to algebra, via the notion of admissible modules. These are modules of the Lie algebra  $\mathfrak{g}$  and the compact maximal subgroup  $K$  satisfying a compatibility condition. A small set of K-types, called diminutive, control a great deal of information. In this talk I will survey these notions and highlight applications to unitarity, and normality (in the sense of algebraic geometry) of nilpotent orbits in the Lie algebra.

Date: July 26, 2023 (Wednesday)

Time: 2:00 - 3:00pm

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

*All are welcome*