

Harish-Chandra's philosophy of cusp forms via Lie groupoids

lundi 15 décembre 2025 10:45 (45 minutes)

Harish-Chandra spent his career understanding the unitary representations of real reductive Lie groups like $SL(n, \mathbb{R})$. One of the crucial points in this theory is his “philosophy of cusp forms”, which says that any tempered unitary representation of a real reductive group (with compact centre) is either discrete series, meaning it is a subrepresentation of the regular representation, or it is induced from a parabolic subgroup, such as the block upper-triangular subgroup in $SL(n, \mathbb{R})$. This sets up an inductive argument over ever smaller subgroups. I will describe how Harish-Chandra's principal follows from a Lie groupoid construction due to Omar Mohsen plus some C^* -algebra theory.

(Joint work with Jacob Bradd and Nigel Higson)

Orateur: YUNCKEN, Robert