On the distinction of Harish-Chandra modules and its Ext-analogues.

Abstract:

One core problem in relative harmonic analysis is to study the space of \( H \)-invariant linear functionals on an admissible representation, where \( H \) is a spherical subgroup of a reductive group \( G \) over a local field. In this talk, I will focus on the Archimedean case in the setting of Harish-Chandra modules. I will review the interpretation of these Hom spaces in terms of certain regular holonomic D-modules on \( G/H \) (arXiv:1905.08135), under mild conditions on \( H \). Then I will try to sketch a possible extension of this strategy to the Ext-analogues and the Euler-Poincaré numbers. This is a work in progress.