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.