



THE WEIZMANN INSTITUTE OF SCIENCE  
FACULTY OF MATHEMATICS AND COMPUTER SCIENCE  
Algebraic Geometry and Representation Theory Seminar

on Wednesday, Jul 29, 2020  
at 16:30

ZOOM: [HTTPS://WEIZMANN.ZOOM.US/J/98304397425](https://weizmann.zoom.us/j/98304397425)

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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.

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