

---

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

Room 290C ,Ziskind Building  
on Tuesday, Dec 26, 2017at 11:15

Eyal Subag Penn State University

Algebraic Families of Harish-Chandra Modules and their Application

Abstract:

I shall review the framework of algebraic families of Harish-Chandra modules, introduced recently, by Bernstein, Higson, and the speaker. Then, I shall describe three of their applications.

The first is contraction of representations of Lie groups. Contractions are certain deformations of representations with applications in mathematical physics.

The second is the Mackey bijection, this is a (partially conjectural) bijection between the admissible dual of a real reductive group and the admissible dual of its Cartan motion group.

The third is the hidden symmetry of the hydrogen atom as an algebraic family of Harish-Chandra modules.