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

Room 141 ,Ziskind Building  
on Tuesday, May 23, 2017at 11:15

**PLEASE NOTE THE UNUSUAL ROOM**  
Yakov Varshavsky HUJI

On the depth  $r$  Bernstein projector.

Abstract:

This is a joint work with Bezrukavnikov and Kazhdan. The goal of my talk is to give an explicit formula for the Bernstein projector to representations of depth  $\leq r$ . As a consequence, we show that the depth zero Bernstein projector is supported on topologically unipotent elements and it is equal to the restriction of the character of the Steinberg representation. As another application, we deduce that the depth  $r$  Bernstein projector is stable. Moreover, for integral depths our proof is purely local.