



THE WEIZMANN INSTITUTE OF SCIENCE  
FACULTY OF MATHEMATICS AND COMPUTER SCIENCE

Algebraic Geometry and Representation Theory Seminar

Room 155 ,Ziskind Building  
on Tuesday, Jan 21, 2020  
at 11:15

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A bridge between  $p$ -adic and quantum group representations via Whittaker  
coinvariants.

Abstract:

Unramified principal series representations of  $p$ -adic  $GL(r)$  and its metaplectic covers are important in the theory of automorphic forms. I will present a method of relating the Whittaker coinvariants of such a representation with representations of quantum affine  $gl_n$ . This involves using a Schur-Weyl duality result due to Chari and Pressley and it allows us to compute the dimension of the Whittaker model of every irreducible smooth representation with Iwahori fixed vectors.

If time permits I will explain a conjectured version of this result for the symplectic group  $Sp(2r)$  which involves quantum symmetric pairs.