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

Room 1 ,Ziskind Building  
on Wednesday, Sep 06, 2017at 11:15

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Reductive groups attached to representations of the general linear supergroup  $GL(m|n)$

Abstract:

Let  $\text{Rep}(GL(m|n))$  denote the category of finite-dimensional algebraic representations of the supergroup  $GL(m|n)$ . Nowadays the abelian structure ( $\text{Ext}^1$  between irreducibles, block description,...) is well understood. Kazhdan-Lusztig theory gives an algorithmic solution for the character problem, and in special cases even explicit character formulas. However we understand the monoidal structure hardly at all (e.g. the decomposition of tensor products into the indecomposable constituents). I will talk about the problem of decomposing tensor products "up to superdimension 0", i.e. about the structure of  $\text{Rep}(GL(m|n))/N$  where  $N$  is the ideal of indecomposable representations of superdimension 0.