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

Room 155 ,Ziskind Building  
on Tuesday, Sep 04, 2018at 11:15

Nir GadishUniversity of Chicago

Stable character theory and representation stability.

Abstract:

Various algebraic and topological situations give rise to compatible sequences of representations of different groups, such as the symmetric groups, with stable asymptotic behavior. Representation stability is a recent approach to studying such sequences, which has proved effective for extracting important invariants. Coming from this point of view, I will introduce the associated character theory, which formally explains many of the approach's strengths (in char 0). Central examples are simultaneous characters of all symmetric groups, or of all  $GL(n)$  over some finite field. Their mere existence gives applications to statistics of random matrices over finite fields, and raises many combinatorial questions.