



THE WEIZMANN INSTITUTE OF SCIENCE
FACULTY OF MATHEMATICS AND COMPUTER SCIENCE

Algebraic Geometry and Representation Theory Seminar

Room 290C ,Ziskind Building
on Tuesday, Dec 19, 2017
at 11:15

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L-function of cuspidal representations of G_2 and their poles

Abstract:

In this talk I will describe a family of integral representations for the standard twisted L-function of a cuspidal representation of the exceptional group of type G_2 . These integral representations are unusual in the sense that they unfold with a non-unique model. A priori this integral is not Eulerian but using remarkable machinery proposed by I. Piatetski-Shapiro and S. Rallis we prove that in fact the integral does factor. In the course of the local unramified calculation we use another non-standard method, approximations of generating functions. I will then describe a few applications of these integral representations to the study of the analytic behaviour of the this L-function and to various functorial lifts associated with the group G_2 .