Seminar

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Some degenerate Whittaker functions for $Sp_n(\mathbb{R})$

Tuesday, May 26, 2015

at 10:00 h

ESI, Boltzmann Lecture Hall

Abstract: In a classic paper, Goodman and Wallach showed that Whittaker functionals can be obtained from conical functionals by applying certain differential operators of infinite order. Matumoto subsequently proved the existence of such operators in great generality. In the case of an abelian unipotent radical, after passage to the Fourier transform, a Goodman-Wallach operator can be expressed in terms of multiplication by an analytic function. For the group $G = SL_2(\mathbb{R})$, Goodman and Wallach gave an explicit formula for this function as an IJ-Bessel function. In this talk, I will describe a generalization of their computation to the case of degenerate principal series for the symplectic group $Sp_n(\mathbb{R})$ of rank n. The result involves Bessel functions and confluent hypergeometric functions of a matrix argument as defined in the classic paper of Herz. (This is part of a joint project with J. Bruinier and J. Funke)

J. Schwermer

May 21, 2015