Lie Groups and Representation Theory Seminar
at the University of Tokyo

リー群論・表現論セミナー

DATE October 2 (Tue), 2007, 16:30–18:00
PLACE Room 126, Graduate School of Mathematical Sciences
SPEAKER Pablo Ramacher (Göttingen University)
TITLE Invariant integral operators on affine G-varieties and their kernels

ABSTRACT We consider certain invariant integral operators on a smooth affine variety $M$ carrying the action of a reductive algebraic group $G$, and assume that $G$ acts on $M$ with an open orbit. Then $M$ is isomorphic to a homogeneous vector bundle, and can locally be described via the theory of prehomogenous vector spaces. We then study the Schwartz kernels of the considered operators, and give a description of their singularities using the calculus of $b$-pseudodifferential operators developed by Melrose. In particular, the restrictions of the kernels to the diagonal can be described in terms of local zeta functions.