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Abstracts of Short Communications and Posters

Section:

7. Lie Groups and Lie Algebras

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Gel'fand Models, Weil Representations and Twisted Spherical Functions

A Gel'fand Model for a group G is a representation of G which contains every irreducible representation of G exactly once. We present geometrical and cohomological constructions of Gel'fand Models for some finite groups of Lie type. We also give a geometric construction of Weil representations for the $SL_*(2, A)$ groups over an involution ring $(A, *)$. Finally we provide an explicit description, à la Curtis, of the spherical functions associated to the twisted finite analogue of Poincaré's Upper Half Plane. Part of these results is also joint work with M. F. Yañez.