Department of Mathematics,
University of California, San Diego
* * ** *

University of California Lie Theory Workshop

Prof. Vera Serganova

University of California, Berkeley

On the category of bounded (g, k)-modules

Abstract:

This talk is based on my joint work with I. Penkov. Let g be a simple Lie algebra, and k be a reductive subalgebra in g.$A(g, k)-$module M is bounded if it is locally finite over k and the multiplicities of all irreducible finite-dimensional modules in M are uniformly bounded. (Two examples from classical representation theory are ladder modules in Harish-Chandra theory and cuspidal modules in case when k is a Cartan subalgebra).

I will formulate several general results about bounded modules involving primitive ideals theory and geometry (localization). Then I concentrate on the example when $g = B_2$, and k is the principal $sl(2)-$subalgebra, where the complete classification of irreducible simple bounded $(g, k)-$modules is done.

Host: Efim Zelmanov

Saturday, February 16, 2008

11:10 AM

NSB 1205

* *