

## Abstract

The Harish-Chandra Lefschetz principle says that there are similarities between the representation theories for real and  $p$ -adic groups. In this talk, we give one account of such resemblances by constructing an exact functor from the category of Harish-Chandra modules of  $GL(n, \mathbb{C})$  to the category of finite-dimensional modules of graded Hecke algebra  $H_m$  of Type A.

We will show that the functor preserves parabolically induced modules, standard modules, irreducible modules, unitary modules and Dirac series. It also links a Bernstein-Zelevinsky type functor in  $H_m$ -module side to tensor decomposition problems on the  $GL(n, \mathbb{C})$ -module side.

This is a joint work with Kei Yuen Chan.