The doubled method: multiplicity one and its applications

Abstract:

The doubling method, first introduced by Piatetski-Shapiro and Rallis in the 80s, has had numerous applications, e.g. to the theta correspondence and to arithmetic problems. In a series of recent works this method was generalized in several aspects, with an application to functoriality from classical groups to GL(N).

One crucial ingredient for the development of the theory is a multiplicity one result, obtained recently in a joint work with Dima and Rami.

I will briefly survey the method, discuss the multiplicity one result, and talk about applications to covering groups.

Parts of the talk are also based on a collaboration with Cai, Friedberg and Ginzburg.