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.