

## Branching laws and period integrals for non-tempered representations

Questions about decomposition of representations of groups over local fields to subgroups, such as from  $\mathrm{SO}(n)$  to  $\mathrm{SO}(n-1)$ , has been of considerable interest in the recent past with impressive works of Waldspurger, Mœglin-Waldspurger, and Raphael Beuzart-Plessis. Corresponding global question for unitary groups has been partly settled by Wei Zhang.

These questions have so far been considered only for tempered representations (of the group and the subgroup). In this lecture, I will discuss the situation with non-tempered representations.

This is a report on work done with B. Gross and Wee Teck Gan.