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**Monica Nevins\*** (mnevins@uottawa.ca). *Restriction to a maximal compact subgroup in the  $p$ -adic case.* Preliminary report.

Restricting unitary representations of a Lie group to its maximal compact subgroup led to the theory minimal  $K$ -types and thus a powerful classification tool. For  $p$ -adic groups, the question of restricting representations to a maximal compact subgroup is complicated by a number of factors, including: that the maximal compact subgroup is not itself a  $p$ -adic group; that there are many conjugacy classes of maximal compact subgroups; and that the representation theory of these groups is not known. We describe our recent results for low rank cases, as well as progress towards a more general theory. (Received September 13, 2011)