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On the socles of certain parabolically induced representations of p-adic classical groups

Abstract:

In this talk, we consider representations of p-adic classical groups parabolically induced from the products of shifted Speh representations and unitary representations of Arthur type of good parity. We describe how to compute the socles (the maximal semisimple subrepresentations) of these representations algorithmically. As a consequence, we can determine whether these representations are reducible or not. In particular, our results produce many unitary representations.