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Geometric analogues of local Arthur packets for p-adic GL_n

Local Arthur packets are sets of representations of p-adic groups that help us realize important classes of automorphic forms. They have geometric analogues, called ABV-packets. This was first proposed for p-adic groups by David Vogan following his joint work with Adams and Barbasch for real groups. This theory was then adapted by Cunningham et al. for the non-archimedean case. They defined ABV-packets and formulated the conjecture that ABV-packets generalize local Arthur packets. They called it "Vogan's conjecture" to honour the work that led to it, in addition to providing a wealth of examples as evidence. In this talk, I will introduce ABV-packets and present a proof of Vogan's conjecture for p-adic GL_n .