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Fourier coefficients and small automorphic representations

I will start with an introduction to certain aspects of the theory of automorphic representations, with emphasis on the Fourier-Whittaker coefficients attached to so called degenerate Whittaker models. I will then focus "small" representations and discuss recent results on minimal and next-to-minimal representations of simple Lie groups. If time permits I will mention applications to p-adic spherical vectors. Part of the motivation for this work originated in string theory. Based on joint works with Fleig, Gourevitch, Gustafsson, Kleinschmidt, Liu and Sahi.