

VECTOR VALUED MODULAR FORMS AS JACOBI FORMS

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ABSTRACT. Recently I found the theorem that every space of elliptic vector valued modular forms which transforms under a representation of $SL(2, \mathbb{Z})$ (or its well-known twofold central extension) whose kernel is a congruence subgroup can in fact be naturally regarded as a space of Jacobi forms. The proof uses various techniques and facts from the theory of lattices, the theory of Weil representations and quaternion algebras. We report about this result and indicate the main steps of the proof. If there is enough time we discuss the situation for vector valued Hilbert modular forms.