SIEGEL MODULAR FORMS AND THETA SERIES ATTACHED TO QUATERNION ALGEBRAS

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Introduction

The two main problems in the theory of the theta correspondence or lifting (between automorphic forms on some adelic orthogonal group and on some adelic symplectic or metaplectic group) are the characterization of kernel and image of this correspondence. Both problems tend to be particularly difficult if the two groups are approximately the same size.

Eichler's famous solution of the basis problem for elliptic modular forms [E4] (and its representation theoretic versions by Shimizu and

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