Meeting: 1003, Atlanta, Georgia, AWMWKSHOP, AWM Workshop

1003-00-1291 **Kathrin Bringmann*** (bringman@math.wisc.edu), Department of Mathematics, Van Vleck Hall, University of Wisconsin, Madison, WI 53706. *Lifting maps from a vector space of Jacobi cusp forms to a subspace of certain elliptic modular forms.*

We define for a Jacobi cusp form ϕ the lifting map $\mathcal{S}_{D_0,r_0}(\phi)(w)$ as a Fourier expansion, where the Fourier coefficients are certain sums of special values of the Fourier coefficients of ϕ. Moreover we define for a function $f \in S_k(\frac{1}{2}\det(2m))^-$, i.e., the subspace of cusp forms with respect to $\Gamma_0(\frac{1}{2}\det(2m))$ that have eigenvalue -1 under the Fricke involution $W_{\frac{1}{2}\det(2m)}$, the lifting map $\mathcal{S}^*_{D_0,r_0}(\tau, z)$ as a Fourier expansion, where the Fourier coefficients are certain cycle integrals. Our aim is to prove (under certain restrictions) the following Theorem. **Theorem.** *If ϕ is in $J^{cusp}_{k+\frac{g+1}{2},m}$, then the function $\mathcal{S}_{D_0,r_0}(\phi)(w)$ is an element of $S_{2k}(\frac{1}{2}\det(2m))^-$. If $f \in S_{2k}(\frac{1}{2}\det(2m))^-$ the function $\mathcal{S}^*_{D_0,r_0}(f)(\tau, z)$ is in $J^{cusp}_{k+\frac{g+1}{2},m}$. The maps $\mathcal{S}_{D_0,r_0} : J^{cusp}_{k+\frac{g+1}{2},m} \to S_{2k}(\frac{1}{2}\det(2m))^-$ and $\mathcal{S}^*_{D_0,r_0} : S_{2k}(\frac{1}{2}\det(2m))^- \to J^{cusp}_{k+\frac{g+1}{2},m}$ are adjoint maps with respect to the Petersson scalar products.*

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