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*Representations of  $SL(2, \mathbb{Z})$  and elliptic modular functions*

The group  $SL(2, \mathbb{Z})$  admits remarkable representations on finite-dimensional spaces constructed from classical theta functions. It turns out that these representations can be viewed as oscillator representations of finite quotients  $SL(2, \mathbb{Z}/n\mathbb{Z})$ . Particular examples of such groups are the binary polyhedral groups corresponding to Dynkin diagrams of type  $D_5, E_6, E_7, E_8$  by the McKay correspondence. The purpose of the talk is to point out a striking analogy between these representations of  $SL(2, \mathbb{Z})$  and certain representations of Weyl groups on spaces of characters of semisimple Lie groups, the characters of the Lie group playing the role for the Weyl group which the modular elliptic functions play for  $SL(2, \mathbb{Z})$ .