A CONFORMAL GEOMETRIC ALGEBRA CONSTRUCTION OF THE MODULAR GROUP

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I will discuss a new construction of the modular group [1]. My interest in the modular group stems from recent Moonshine observations, relating string theory, finite simple groups and (mock) modular forms [2, 3]. The modular group is a subgroup of the 2D conformal group and I use the conformal model in Geometric Algebra with the corresponding Clifford realisations of the conformal group [4, 5] to construct a new realisation of the modular group. The double cover of the modular group is the braid group; of course this Clifford construction in fact provides a double cover of the conformal and thus modular groups, and we will discuss the relation with the braid group.

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