

BRANDEIS UNIVERSITY

Everytopic Seminar

**Friday, November 6**

in room 226 at 1:40pm

Genus zero functions in generalized  
moonshine

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It is well-known that many objects that show up in conformal field theory have characters that exhibit good behavior with respect to an action of  $SL(2, \mathbf{Z})$ , i.e., there is an action on some finite dimensional space of  $q$ -expansions. Examples include representations of affine Lie algebras, and more generally, rational vertex algebras and their modules. The characters arising in monstrous moonshine and generalized moonshine obey a stronger condition, where their invariance groups give genus zero quotients. The physical significance of this condition is still mysterious, but there are clues from the theory of equivariant Hecke operators, which made their first appearance in the context of power operations in elliptic cohomology.