

ALGEBRA
SEMINAR

On the Distribution of Moonshine

Michael Griffin
Emory

Abstract: Monstrous moonshine expresses distinguished modular functions in terms of the representation theory of the Monster. The celebrated observations that

$$(*)1 = 1, 196884 = 196883 + 1, 21493760 = 1 + 196883 + 21296876, \dots$$

illustrate the case of $J(z) = j(z) - 744$, where the coefficients are sums of the dimensions of the 194 irreducible representations of the Monster. Such formulas are dictated by the structure of the graded monstrous moonshine modules. Here we use the modularity of the moonshine modules to address the open problem of obtaining exact formulas for the multiplicities of the irreducible components of the moonshine modules. These formulas imply that such multiplicities are asymptotically proportional to dimensions.

Tuesday, September 16, 2014, 4:00 pm
Mathematics and Science Center: W306

MATHEMATICS AND COMPUTER SCIENCE
EMORY UNIVERSITY