1107-00-126   **Xuhua He***, Department of Mathematics, University of Maryland, College Park, MD 20742.
Rigid character tables of affine Hecke algebras.

It is known that the number of conjugacy classes of a finite group equals the number of irreducible representations (over complex numbers). The conjugacy classes of a finite group give a natural basis of the cocenter of its group algebra. Thus the above equality can be reformulated as a duality between the cocenter of the group algebra and the Grothendieck group of its finite dimensional representations. One may define the character table for the finite group. This is an invertible matrix, which describes the duality between the cocenter and the representations.

In recent joint works with Ciubotaru, and with Nie, we study the duality between the cocenter and representations of affine Hecke algebras. We introduce the rigid character table, which play an essential way to understand the cocenter-representation duality. In this talk, I will discuss some properties on the rigid character table and make some conjectures. (Received January 09, 2015)