

1009-81-152

Po Hu (po@math.wayne.edu), Department of Mathematics, WSU, 656 W. Kirby, Room 1150 Faculty/Administration Bldg., Detroit, MI 48202, and **Igor Kriz*** (ikriz@umich.edu), Department of Mathematics, UM, 2074 East Hall, 530 Church St., Ann Arbor, MI 48109-1043. *A mathematical formalism for the Kondo effect in WZW branes.*

In physics, it has been shown that non-equivariant twisted K-theory of a compact Lie group G classifies the charges of D-branes in the corresponding WZW model on G . The WZW model is a conformal field theory which can be described by loop group representations of a given level.

This talk will deal with the question of making the D-brane charge identification into a precise mathematical statement. In particular, we introduce mathematical concepts designed to model rigorously the concept of D-branes, and renormalization group processes, notably the so called Kondo effect, which is the main ingredient of the twisted K-theory identification. A first version of this paper is available on hep-th/0508050. This investigation was inspired by a question of Mike Hopkins. (Received August 14, 2005)