

1064-55-362

Matthew Ando* (mando@illinois.edu), Department of Mathematics, University of Illinois,
1409 W Green St, Urbana, IL 61801. *Fibered WZW models and Lipsky's cocycle
construction*. Preliminary report.

By work of Grojnowski and myself, and independently Lurie, the Verlinde algebra at level k of a simple and simply connected lie group G appears in elliptic cohomology as the k -twisted G -equivariant elliptic cohomology of a point. We'll describe this result, and explain how it provides insight on the equivariant string orientation. Then we'll explain how loop group representations give rise to exotic elliptic genera, which have been studied by Kefeng Liu and myself. Recently Distler and Sharpe have given a physical interpretation of these genera, and David Lipsky has made significant progress towards constructing the corresponding enriched topological field theories. (Received September 14, 2010)