

The Oliver Club

www.math.cornell.edu/~oliver/

Dirac Operators in Representation Theory

We will first review Dirac's original construction, as well as a few basic facts and examples of representations of reductive Lie groups. Then we will describe a version of the Dirac operator related to representations and explain its properties and relevance. We will present a result, conjectured by Vogan and proved by J.-S. Huang and myself in 2002. This result says that in certain cases the action of the Dirac operator determines the infinitesimal character, the most basic invariant of a representation. We will also comment on relationships with Lie algebra cohomology and finish by mentioning some open problems



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Refreshments will be served at 3:55 PM in the
Mathematics Department lounge (532 Malott Hall).

Thursday, January 24, 2008
at 4:25 PM in 406 Malott Hall