

1041-19-112

Robert E Yuncken* (yuncken@math.uvic.ca), Mathematics and Statistics, University of Victoria, PO BOX 3060 STN CSC, Victoria, BC V8W 3R4, Canada. *Index Theory for $SL(n, C)$* .

When working on homogeneous spaces, differential and pseudodifferential operators can often be analyzed using representation theory. For instance, a beautiful construction of Bernstein, Gelfand and Gelfand from the 1970's shows how to produce cohomological complexes for complete flag manifolds of semisimple groups in this way. In later decades, analogous constructions in K-homology appeared in proofs, due to Kasparov and Julg, of the Baum-Connes Conjecture for rank-one semisimple groups. The purpose of this talk will be to describe a method for making such a construction for the rank-two group $SL(3, C)$. We will also discuss the situation for $SL(n, C)$. (Received August 06, 2008)