

Mathematics Department Topology Seminar

The connective  $k$  theory of finite groups

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**Abstract**

The real connective  $k$  homology of finite groups,  $ko_*(BG)$ , plays a big role in the Gromov-Lawson-Rosenberg (GLR) conjecture. In order to compute them, we can calculate complex connective  $k$  cohomology,  $ku^*(BG)$ , first, and then follow by computing complex connective  $k$  homology,  $ku_*(BG)$  or by real connective  $k$  cohomology,  $ko^*(BG)$ . After we apply the Bockstein spectral sequence to  $ku_*(BG)$  or the Greenlees spectral sequence to  $ko^*(BG)$ , we shall get  $ko_*(BG)$ . In this talk, we will illustrate how to compute  $ku^*(BG)$  and  $ku_*(BG)$  by using the method developed by Prof.R.R.Bruner and Prof. J.P.C. Greenlees, especially on semidihedral group of order 16.