TOPOLOGY SEMINAR

"A SURVEY ON CONSTRUCTING FREE ACTIONS ON PRODUCTS OF SPHERES"

BY

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Abstract:I will give a survey of problems and recent results on constructing free actions on products of spheres. The rank conjecture, due to Benson and Carlson, states that a finite group G acts freely and cellularly on a finite complex X homotopy equivalent to a product of k spheres if and only if the rank of G is less than or equal to k. This conjecture is known to be true for k=1 by classical Smith theory and by a theorem of Swan. For k=2 it is proved by Adem and Smith, and Jackson that if a rank two finite group does not involve the group Qd(p) for any odd prime p, then it acts freely and cellularly on a finite complex X homotopy equivalent to a product of two spheres. I will discuss what is known for the remaining case G=Qd(p). The most recent results that I will present are joint work with Cihan Okay. I will also mention some earlier work joint with Ozgun Unlu and with Ian Hambleton.

Date: April 9, 2018 Monday
Time: 13:40-14:30
Place: SA141 Mathematics Seminar Room
* Tea and cookies will be served after the talk. All are most cordially invited.