

- **Hambleton, Ian: Co-compact discrete group actions and the assembly map (203)**

A discrete group  $\Gamma$  can act freely and properly on  $S^n \times \mathbb{R}^k$ , for some  $k, n > 0$  if and only if  $\Gamma$  is a countable group with periodic Farrell cohomology: Connolly-Prassidis (1989), assuming  $\text{vcd}(\Gamma)$  finite, and Adem-Smith (2001). For free *co-compact* actions there are additional restrictions „at infinity“, but no general sufficient conditions are known. The talk will survey this problem and its connection to the Farrell-Jones assembly maps in K-theory and L-theory.