

University of Notre Dame Department of Mathematics

TOPOLOGY SEMINAR

Daniel Ramras

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Will give a lecture entitled:

Quillen-Lichtenbaum Phenomena in Stable Representation Theory

On

Thursday, March 24, 2011

At

12:45 PM

In

258 Hurley Hall

Abstract

In the early 1960's, Atiyah, Hirzebruch, and Segal constructed and studied a mapping from the representation ring of a compact Lie group G to the K -theory of the classifying space BG . For infinite discrete groups, an analogous map exists on the level of representation spaces and their associated deformation K -theory spectra.

Computations have shown that in certain interesting cases, this map is an equivalence on highly connected covers. This situation is closely analogous to the Quillen-Lichtenbaum conjectures in algebraic K -theory, which are known to fail in low dimensions. In this case, the low-dimensional failure admits a concrete geometric explanation, relying on methods from differential and algebraic geometry.

This is joint work with Tom Baird.