



UNIVERSITY OF CALIFORNIA RIVERSIDE

DEPARTMENT OF MATHEMATICS

Colloquium

Dr. Philip Hackney
(UCR)

“Combinatorial Approaches in Homotopy Theory”

Abstract:

Topological analogues of common algebraic notions, such as the idea of being a group, are not invariant when one passes between spaces which are homotopy equivalent. What should a “group up to homotopy” mean? The exploration of homotopy invariant versions of categorical and algebraic structures has been ongoing since the early days of algebraic topology.

Our focus will be on the interface between category theory and homotopy theory. In joint work with Julie Bergner we have proven rigidification theorems for weak operads with group actions. In work with Marcy Robertson we have laid the foundation for a homotopy theory of props, which includes establishing a model category structure on the category of simplicial props.

Wednesday, November 28th, 2012

Surge 284

Tea Time 3:40 p.m. – Talk Begins 4:10 p.m.