



# Algebra/Topology Seminar

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## GEOMETRICALLY CONTROLLED ALGEBRA OVER NEW CLASSES OF METRIC SPACES

Thursday, February 28, 2013

1:15 p.m. in ES-143

ABSTRACT. This talk will be in two parts. In the first half of the talk I will define several conditions on metric spaces that appeared in the last couple of years. The conditions are global versions of classical definitions of dimension of compact metric spaces. In the second half, I will explain how these conditions allow to perform interesting constructions in algebra. For example, there is the following rare phenomenon. There is a new category of finitely generated modules over a nonnoetherian group ring where homomorphisms of a specific type always have finitely generated kernels. This is enough for a construction of projective resolutions of finite type for those modules. This can be used to compute the K-theory of these nonnoetherian group rings of interest in topology. I don't think I will have time left to explain that.