

Algebra/Topology Seminar

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SPANIER-WHITEHEAD K -DUALITY

Thursday, November 3, 2016

1:15 p.m. in ES-143

ABSTRACT. Classical Spanier-Whitehead duality was introduced for the stable homotopy category of finite CW complexes. We consider a noncommutative version, termed Spanier-Whitehead K -duality, which is defined on the category of C^* -algebras whose K -theory is finitely generated and that satisfy the UCT, with morphisms the Kasparov KK -groups. Examples from foliations, hyperbolic dynamics, and other highly non-commutative C^* -algebras illustrate the truly new phenomena encountered. There are many open questions associated with relaxing the assumptions on the algebras. For example, does the Calkin algebra have a Spanier-Whitehead K -dual? This is joint work with Jerry Kaminker.