

Title: Tensor-Product Coaction Functors

Speaker: John Quigg

Abstract: Baum-Guentner-Willett introduced “exotic crossed products” in an attempt to “fix” the Baum-Connes Conjecture. The exotic crossed products are required to form an exact functor of actions, and are desired to be as small as possible. We have modified the [BGW] program by casting it in terms of coaction functors. One particularly interesting exotic crossed product of [BGW] involves tensoring with a fixed action, and Buss-Echterhoff-Willett showed that the smallest such involves $\ell^\infty(G)$. To incorporate this into our coaction-functor program, we need to tensor with a fixed coaction. In a recent paper, we did this for discrete groups using a “ G -balanced tensor product” sitting inside the (maximal) tensor product, which required developing the basic theory of them, including a crucial technical isomorphism involving crossed products of actions. We now see a way to do what we want with locally compact groups, using a more efficient technique. We prove versions for coaction functors of the theorems of [BGW] and [BEW], namely, our tensor coaction functors are exact, are minimal when tensoring with the crossed product of $UCB(G)$, and reproduce the tensor-crossed-product functors of [BGW] when composed with the full crossed product. This is joint work with Steve Kaliszewski and Magnus Landstad.