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Invariants for inclusions of C*-algebras

Many combinatorial objects (or similar) give rise to a C*-algebra with a distinguished C*-subalgebra. Examples of such which have been studied a lot in the past decade are étale groupoids which give rise to a so-called Cartan pair, consisting of the groupoid C*-algebra and a commutative C*-subalgebra. Other examples include discrete groups acting on compact Hausdorff spaces, for which the reduced crossed product C*-algebra contains the reduced group C*-algebra as a C*-subalgebra.

I will talk about invariants and properties for such inclusions of C*-algebras. This talk will be somewhat non-standard (for me, at least) and will only contain few (if even any) theorems, but should more be thought of as a conversation starter/brainstorm for what invariants one can associate to certain mathematical objects.