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S. Kaliszewski, Tron Omland and John Quigg* (quigg@asu.edu), School of Math and Stat Sciences, Arizona State University, PO Box 871804, Tempe, AZ 85287-1804. *Generalized fixed-point algebras and a theorem of Pedersen.*

If an abelian locally compact group G acts on a C^* -algebra, an old theorem of Landstad shows how to recover the action up to isomorphism from the crossed product, using a generalized fixed-point algebra determined by the dual action (of the dual group \widehat{G}) and an equivariant embedding of $C_0(\widehat{G})$. Pedersen showed how, forgetting about $C_0(\widehat{G})$, one recovers the original action up to outer conjugacy. We parlay this into an equivalence between two equivariant categories of C^* -algebras, where the isomorphisms in one are given by outer conjugacies of actions of G , and in the other by generalized fixed-point algebras of actions of \widehat{G} . Somehow irritating, it seems difficult to find examples with different generalized fixed-point algebras (and consequently non-exterior equivalent actions of G), and we discuss various approaches to this problem. All of the preceding makes sense, and some of it has been proven, for nonabelian G , but we eschew opening that particular can of worms in this talk. (Received February 10, 2016)