

TRACES IN KK-THEORY AND INDEX PAIRINGS

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Traces on C^* -algebras play an important role in index theory, for instance they allow to extract numerical invariants from classes in K -theory. By introducing real coefficients in Kasparov bivariant K -theory, traces give classes in $KK_{\mathbb{R}}$. The process of applying a trace then corresponds to taking the Kasparov product. In this talk, we explain these constructions and some applications. In particular, we give a natural $KK_{\mathbb{R}}$ -class that represents the Godbillon-Vey invariant of a foliation of codimension one.

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