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Pierre Clare* (prclare@wm.edu), 200 Ukrop Way, Williamsburg, VA 23187, and **Nigel Higson**, **Yanli Song** and **Xiang Tang**. *The Connes-Kasparov Isomorphism and essential representations*.

The Connes-Kasparov isomorphism between the ring of representations of a maximal compact subgroup K of a real reductive group G and the K-theory of the reduced C*-algebra of G has long been known to yield a correspondence between discrete series of G and certain representations of K . In this talk, I will report on joint work with N. Higson, Y. Song and X. Tang providing a characterization of all the representations of G that contribute to the K-theory of $C_r^*(G)$ in terms of Dirac cohomology and leading to a new, representation-theoretic proof of the Connes-Kasparov isomorphism. (Received January 22, 2022)