

BOSTON UNIVERSITY GEOMETRY SEMINAR

An index theorem in differential K-theory

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Friday, March 25, 3-4 pm in MCS 149.

Please note special date/time

Tea 2:45-3 in MCS 153.

Abstract: Differential K-theory is a refinement of the usual K-theory of a manifold. Its objects consist of a vector bundle with a Hermitian inner product, a compatible connection and an auxiliary differential form. Given a fiber bundle with a Riemannian structure on its fibers, and a differential K-theory class on the total space, I will define two differential K-theory classes on the base. These can be considered to be topological and analytic indices. The main result is that they are the same. This is joint work with Dan Freed.