

Kempner Colloquium

HIGHER INDEX THEOREMS FOR PROPER ACTIONS

Hessel Posthuma

(Korteweg-de Vries Institute, University of Amsterdam)

INTEGRATION OF EXACT COURANT ALGEBROIDS

Xiang Tang

(Washington University)

(Posthuma) In this talk I will describe a cohomological version of the so-called Baum-Connes map which associates to any proper action of a Lie group a natural class of index theorems. These index theorems generalize various well-known classical cases such as the Atiyah-Singer index theorem and its variants. If time permits, I will explain the extension to groupoids. This talk is based on joint work with Markus Pflaum and Xiang Tang.

(Tang) In this talk, we will discuss some recent progress about the problem of integration of exact Courant algebroids. We construct an infinite-dimensional symplectic 2-groupoid as the integration of an exact Courant algebroid. We show that every integrable Dirac structure integrates to a “Lagrangian” sub-2-groupoid of this symplectic 2-groupoid. This is joint work with Rajan Mehta.

March 10, 2014
4:10 p.m. and 5:10 p.m.
MATH 350