



Kolloquium über Reine Mathematik

Einladung zu einem Vortrag

Dienstag, 19. November 2019

17 Uhr s.t., Geom H4

Dr. Sara Azzali

(Universität Hamburg)

Discrete group actions and the Baum-Connes conjecture

Abstract:

The Baum-Connes conjecture predicts an isomorphism between two objects associated with a discrete countable group. The first one is topological in nature and involves a classifying space for proper actions, the second one is analytic and involves the K -theory of a group C^* -algebra.

One of the main motivations of the Baum-Connes conjecture is that it implies the Novikov conjecture on the homotopy invariance of higher signatures.

We first give an introduction to the topic, and describe the framework of Kasparov's bivariant K -theory, which is at the base of many of the known results for the two conjectures.

We then describe the advantages of introducing real coefficients in bivariant K -theory, and present a variant of the Baum-Connes conjecture which is localised at the unit element of a discrete group. The localised conjecture is weaker than the classical one, but still implies the Novikov conjecture. Joint work with Paolo Antonini and Georges Skandalis.

Vor dem Vortrag (ab 16.30 Uhr) stehen im Raum 327 Kaffee und Tee bereit.