Target audience: doctoral students, researchers and Professors in Mathematic

In Room AAC 006

Romain Tessera (Vanderbilt University)

Wednesday, June 13th at 11:00 AM

To be followed by discussion

“Isoperimetry on Solvable Groups and Random Walks”

Abstract:

We exhibit a large class of locally compact amenable groups having the same isoperimetric profile and the same probability of return for random walks. This class of groups contains closed subgroups of triangular matrices over local fields and their quotients, but some of them are not linear.

Wednesday, June 13th at 2:00 PM

To be followed by discussion

“Isoperimetry on Solvable Groups and Affine Isometric Actions on L^p-spaces”

Abstract:

In this talk, we introduce a variant of the isoperimetric profile on groups that we compute on a large class of solvable groups (in particular connected Lie groups). We show how this can be used to construct proper 1-cocycles with values in the regular representation of the group. The compression of these cocycles is optimal in a number of cases.

Monday, June 18th at 2:00 PM

To be followed by discussion

“Property A and Coarse Embeddings into L^p-spaces”

Abstract:

We introduce a quantitative L^p-version of Yu's property A on metric spaces and use it to construct coarse embeddings into L^p-spaces. The compression of such embeddings can be shown to be optimal in some important cases, such as 3-regular trees, semi-simple Lie groups, and even certain self-similar spaces with polynomial growth.