Mês de: Fevereiro 2012

## SEMINÁRIO DE TEORIA DOS MODELOS

## Dia 23 de Fevereiro (quinta-feira), às 15h, na Sala A2-25

Discrete Subgroups of Locally Definable Groups

## Marcello Mamino

(CMAF - UL)

## **Abstract:**

We work in the category of locally definable groups in an o-minimal expansion of a field. Eleftheriou and Peterzil conjectured that every definably generated abelian connected group G in this category, is a cover of a definable group. We prove that this is the case under a natural convexity assumption inspired by the same authors, which in fact gives a necessary and sufficient condition. The proof is based on the study of the zero-dimensional compatible subgroups of G. We prove that the rank of such groups is bounded by the dimension of G. We also obtain the finiteness of the n-torsion subgroup under a divisibility assumption. Under a convexity hypothesis we show that the fundamental group of G is finitely generated. (Join work with A. Berarducci and M. Edmundo)

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