SEMINARIO IMAC DE ANÁLISIS

Conferencia a cargo de

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A characterization of Lie groups via locally minimal groups

ABSTRACT: A topological group G is called locally minimal if there exists a neighbourhood V of the identity such that for every Hausdorff group topology $\sigma \leq \tau$ with $V \in \sigma$ one $\sigma = \tau$. Locally compact groups are locally minimal. Minimal groups (i.e., the topological groups satisfying the open mapping theorem with respect to continuous isomorphisms) are locally minimal as well. According to a well known theorem of Prodanov every subgroup of an infinite compact abelian group K is minimal if and only if K is isomorphic to the group Z_p of p-adic integers for some prime p.

There is a remarkable connection of local minimality to Lie groups and p-adic numbers by means of the following results extending rodanov's theorem: *every subgroup of a locally compact abelian group K is locally minimal if and only if K is either a Lie group or K has an open subgroup isomorphic to Z_p for some prime p*. In the non abelian case we prove that all subgroups of a connected locally compact group are locally minimal if and only if K is a Lie group.

Fecha: 26 de octubre de 2016, a las 11:00 horas

Lugar: **IMAC** **(***Seminario TI1329SD)*, ESTCE. Universitat Jaume I de Castelló