

University of Puerto Rico
Faculty of Natural Sciences
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COLLOQUIUM

A nonlinear maximal group topology

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Abstract: We show that, assuming Martin's Axiom MA, there is a nonlinear maximal group topology. That is, assuming MA, there is an ultrafilter \mathcal{U} on $\bigoplus_{\omega} \mathbb{Z}_2$ such that the filter $\mathcal{N} = \{A \cup \{0\} : A \in \mathcal{U}\}$ has no base consisting of subgroups, but for every $U \in \mathcal{N}$, there is $V \in \mathcal{N}$ such that $V + V \subseteq U$. This is the answer to an old question.

Date: MONDAY, APRIL 2, 2012
Time: 10:00-12:00 AM
Room: A-233