Normality of topological groups revisited
by

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Abstract

It was proved by Stone in the 60's that $\mathbb{N}^{\mathbb{R}}$, the uncountable product of copies of $\mathbb{N}$, is not a normal topological space. The same proof can be used to conclude that the uncountable product of copies of the group of integers, $G := \mathbb{Z}^{\mathbb{R}}$ is a nonnormal abelian topological group. We have further proved that, any locally quasi-convex group topology ν on G which gives rise to the same character group as G with its original topology, say $G^{\wedge}$, is nonnormal.

In this talk we shall face the following question: Under which conditions on a fixed group duality $(G, G^{\wedge})$ are there locally quasi-convex compatible normal topologies?.

(The talk is based upon joint work with V. Pérez Valdés)