

Jan J. Dijkstra, Jerzy Mogilski

The ambient homeomorphy of certain function and sequence spaces

Comment.Math.Univ.Carolinae 37,3 (1996) 597-613.

Abstract: In this paper we consider a number of sequence and function spaces that are known to be homeomorphic to the countable product of the linear space σ . The spaces we are interested in have a canonical imbedding in both a topological Hilbert space and a Hilbert cube. It turns out that when we consider these spaces as subsets of a Hilbert cube then there is only one topological type. For imbeddings in the countable product of lines there are two types depending on whether the space is contained in a σ -compactum or not.

Keywords: Hilbert space, Hilbert cube, $\mathcal{F}_{\sigma\delta}$ -absorber, ambient homeomorphism, function space, p -summable sequence

AMS Subject Classification: 57N20