

Strongly uniformly paracompactness

B.E. Kanetov¹, N.A. Baigazieva²

¹ *Faculty of Mathematics and Informatics of Jusup Balasagun Kyrgyz National University, Kyrgyz Republic, 720033, Bishkek, 547 Frunze Street*

² *Institute of Mathematics of Kyrgyz Republic National Academy of Sciences, Kyrgyz Republic, 720071, Bishkek, 265 Chui Street*
bekbolot_kanetov@mail.ru

Abstract:

As we know the paracompactness play an important role in the General Topology. Therefore, the finding of uniform analogues of paracompactness is an important and interesting problem in the theory of uniform spaces. Many well-known mathematicians turned to this problem and as a result different variants of uniform paracompactness of uniform spaces appeared. For example, uniform R -paracompactness in the sense of M.D. Rice [1], uniform B -paracompactness in the sense of A.A. Borubaev [2], uniform F -paracompactness in the sense of Z. Frolik [3], uniform P -paracompactness in the sense of B.A. Pasynkov [4], uniform A -paracompactness in the sense of L.V. Aparina [5], uniform I -paracompactness in the sense of D.R. Isbell [6].

In this article we show a new approach to the definition of a uniform analog of strongly paracompactness. We introduce and investigate uniform analogues of strongly paracompact and Lindelof spaces. Their connection with other properties of compactness type is studied, and the characteristics of these classes of uniform spaces are also established by means of mappings and compact Hausdorff extensions. In particular, the problem posed by A. Borubaev: what are the uniform spaces that have ω -mapping to some strongly paracompact (separable) metrizable uniform space for any (finitely additive) open covering ω ?

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