

ON THE NOTION OF THE DUAL OF A BANACH BUNDLE

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For an arbitrary continuous Banach bundle over an arbitrary topological space, the notion of a dual bundle is introduced and studied. Various necessary and sufficient conditions are presented for existence of a dual bundle, duality relations are examined between a bundle and its dual, an embedding of a bundle into its second dual is constructed, the notion of a weakly continuous section is introduced and studied. The questions under consideration are treated in the general case as well as for concrete classes of bundles and topological spaces. The results obtained are supplied with examples that justify accuracy of the results.

Key words and phrases: continuous Banach bundle, dual Banach bundle, duality, homomorphism of Banach bundles, continuous section, weakly continuous section.

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