

Takamitsu Yamauchi

On a selection theorem of Blum and Swaminathan

Comment.Math.Univ.Carolinae 45,4 (2004) 681-691.

Abstract: Blum and Swaminathan [Pacific J. Math. 93 (1981), 251–260] introduced the notion of \mathcal{B} -fixedness for set-valued mappings, and characterized realcompactness by means of continuous selections for Tychonoff spaces of non-measurable cardinal. Using their method, we obtain another characterization of realcompactness, but without any cardinal assumption. We also characterize Dieudonné completeness and Lindelöf property in similar formulations.

Keywords: set-valued mapping, selection, realcompact, Dieudonné complete, Lindelöf, \mathcal{B} -fixed, local intersection property, open lower sections

AMS Subject Classification: 54C60, 54C65, 54D20, 54D60