JOINT CONTINUITY OF SEPARATELY CONTINUOUS MAPPINGS

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ABSTRACT. We present a joint work with I. S. Kortezov and W. B. Moors.

We study the set of points of joint continuity of separately continuous mappings $f : Z \times Y \to X$ where $X$ is not necessarily a metrizable space. We provide conditions on the spaces $Z, Y$ and $X$ under which this set is of the second Baire category in every open subset of $Z \times Y$. Conditions are also provided for this set to contain a dense and $G_δ$ subset of $Z \times Y$.

The major technical tools are a topological game related to fragmentability of spaces and the notion “quasi-continuity” of mappings.