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**Abstracts of Short Communications and Posters**

**Section:**

**8. Analysis**

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Maslyuchenko, Volodymyr, Chernivtsi University, Ukraine

**Separately continuous mappings: Van Vleck spaces and inverse problems**

New results on the size of the set $C(f)$ of joint continuity points of separately continuous mappings are presented. We say that $Y$ is a Van Vleck space if the set of all $x$ for which $\{x\} \times Y \subseteq C(f)$ is dense in $X$ for every Baire space $X$, metrizable space $Z$ and mapping $f : X \times Y \to Z$ from a class $\overline{C}C$. It is shown that mappings from a class $\overline{K}C$ have the same property for hereditarely separable Van Vleck space too. This gives us a possibility to obtain new theorems on joint continuity of SCF of $n$ variables which are closely related to Hahn's, Feiock's, Talagrand's and Troallic's results. Besides problems on the construction of SCF with a given set of discontinuity points, an oscillation or a diagonal are investigated. Part of these results is joint work with V. Mykhaylyuk, O. Sobchuk, V. Nesterenko and O. Maslyuchenko.