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Abstracts of Short Communications and Posters

Section:

8. Analysis

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Kadets, Volodymyr M., Kharkov State University, Ukraine, Tseitlin, L. M.
On "integration" of non-integrable vector-valued functions
A new definition of the integral for functions with values in a Banach space is presented. The new integrability is more general than the Bochner or Riemann integrabilities, but more restrictive than the Pettis one. This new definition leads naturally to the notion of the limit set of integral sums, which may be considered as a "generalized integral" for non-integrable functions. This set is shown to be always convex and non-empty when the function has an integrable majorant and the space is separable.