INTEGRATION IN HILBERT GENERATED BANACH SPACES.

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ABSTRACT. We prove that McShane and Pettis integrability are equivalent for functions taking values in a subspace of a Hilbert generated Banach space. This generalizes simultaneously all previous results on such equivalence. The proof relies on the existence, on every subspace of a Hilbert generated Banach space of a strong Markushevich basis with good properties. On the other hand, A. Avilés, G. Plebanek and J. Rodríguez proved recently that there exists a Pettis integrable function defined on $[0, 1]$ and taking values in a weakly compactly generated Banach space which is not McShane integrable.
Joint work with José Rodríguez.