

Separable reductions, rich families and projectional skeletons in non-separable Banach spaces

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We show that continuity, differentiability and the like are separably reducible properties. In this course, we meet the concepts of cofinal and reach families of separable subspaces of a Banach space. The rich families fit very well for indexing projectional skeletons (PS), this modern substitute of PRI introduced by W. Kubiś. The PS are then used for study of various classes of nonseparable Banach spaces like Asplund spaces, WCG spaces and many relatives of them.