

MEASURES OF NONCOMPACTNESS AND SOME APPLICATIONS

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Measures of noncompactness have important applications in various parts of mathematics, in particular, in functional analysis and operator theory. In this talk we give an introduction to measures of noncompactness on bounded sets of complete metric spaces and Banach spaces, and a survey of the most important basic properties of certain measures of noncompactness, in particular, we consider the Kuratowski, Hausdorff and separation measures of noncompactness. We also define and study the Hausdorff measure of noncompactness of operators between Banach spaces. Finally, we deal with some applications of measures of noncompactness.

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