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Applications of measures of noncompactness in matrix transformations

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Abstract
In this work, we define a new difference sequence space $l_p(\triangle)$ and determine the β-dual of the sets $l_p(\triangle)$. We also characterize some matrix transformations and apply the Hausdorff measure of noncompactness to give necessary and sufficient conditions for the entries of an infinite matrix to be a compact operator between the spaces $l_p(\triangle)$ for $1<p<\infty$ and some classical sequence spaces.

Author Keywords
Difference sequence spaces; Matrix transformations; Measure of noncompactness

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