Jarosław Górnicki

Fixed points of asymptotically regular mappings in spaces with uniformly normal structure

Comment.Math.Univ.Carolinae 32,4 (1991) 639-643.

Abstract: It is proved that: for every Banach space X which has uniformly normal structure there exists a $k > 1$ with the property: if A is a nonempty bounded closed convex subset of X and $T : A \to A$ is an asymptotically regular mapping such that

$$\liminf_{n\to\infty} |||T_n||| < k,$$

where $|||T|||$ is the Lipschitz constant (norm) of T, then T has a fixed point in A.

Keywords: asymptotically regular mappings, uniformly normal structure, fixed points
AMS Subject Classification: 47H10