

1087-46-207

Damian Kubiak* (dkubiak@tntech.edu), Mathematics Department, Tennessee Technological University, 110 University Drive; Box 5054, Cookeville, TN 38505. *Uniformly non-square points in Banach spaces and some geometric properties of Cesàro function spaces.*

We show connections between uniformly non-square points and diameter 2 properties in Banach spaces. We apply these results to Cesàro function space $C_{p,w}$, $1 < p < \infty$, induced by arbitrary positive weight function w on interval $(0, l)$ where $0 < l \leq \infty$. We prove, among others, that all non-empty relatively weakly open sets in the unit ball of $C_{p,w}$ have diameter 2. (Received December 04, 2012)