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A NOTE ON ASYMMETRY SETS

In this note we give a difference between measure and category in terms of asymmetry sets. A category analogue of an approximate asymmetry set is σ-well porous, see [6]. Here, we construct a function f for which the approximate asymmetry set is not σ-well porous. In other words, the thesis that every approximate asymmetry set is σ-porous cannot be strenghened to a thesis that every such set is σ-well porous.

Let f be a function from R into R. The asymmetry set of f is denoted by $A(f)$ and defined to be the set of all points $x \in R$ for which $W_-(f,x) \neq W_+(f,x)$ where $W_-(f,x)$,$W_+(f,x)$ denote one sided approximate cluster sets of f at a point x . More precisely, $W_+(f,x)$ is the set of all $y \in R \cup \{-\infty,+\infty\}$ satisfying the following condition, for every neighbourhood U of y , x is not a dispersion point of $f^{-1}(U)$ from the right in the sense of measure. In an analogous way is defined the set $W_-(f,x)$. As in [2] we define the category analogues of one sided dispersion as follows. Let I denote the σ-ideal of all meager sets in R. Let $B \subsetneq R$ be a Baire set .