

Geometric Properties of Cones

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It is well-known that an extreme point of a closed and convex subset of a Banach space is a denting point if and only if it is a point of continuity for such a set. As a consequence, given a closed, convex, and pointed cone C in a Banach space, the origin is a denting point of C if and only if it is a point of continuity for C . The former equivalence is not true for non complete normed spaces and non closed cones, and it is not clear if it remains true for closed cones in non complete normed spaces. In this talk we will state a result establishing that the origin is a denting point of a cone C if and only if it is a point of continuity for C and the dual cone, C^* , is "large enough", i.e., the dual cone verifies $\overline{C^* - C^*} = X^*$. Other related results and consequences will also be stated.

These results are part of a joint work (under review) with M. A. Melguizo Padial. Department of Applied Mathematics. Polytechnic University College - EPSAlicante. University of Alicante.