ON A SUBCLASS OF NORM ATTAINING OPERATORS

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ABSTRACT. A bounded linear operator $T : H \to H$, where H is a Hilbert space, is said to be norm attaining if there exists a unit vector $x \in H$ such that $\|Tx\| = \|T\|$. Let $\mathcal{R}_T$ denote the set of all reducing subspaces of T. Define

$$\beta(H) := \{T \in \mathcal{B}(H) : T|_M : M \to M \text{ is norm attaining for every } M \in \mathcal{R}_T\}.$$

In this talk, we discuss properties and structure of positive operators in $\beta(H)$ and compare with those of absolutely norm attaining operators ($\mathcal{AN}$-operators). This is a joint work with Prof. Hiroyuki Osaka.

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