Some spectral properties for generalized derivations

Mohamed AMOUCH
amouch.m@ucd.ac.ma

(Joint work with Farida Lombarkia)

Abstract.

Given Banach spaces $X$ and $Y$ and Banach space operators $A \in L(X)$ and $B \in L(Y)$. The generalized derivation $\delta_{A,B} \in L(L(Y',X))$ is defined by

$$\delta_{A,B}(X) = (L_A - R_B)(X) = AX - XB.$$

This paper is concerned with the problem of the transferring the left polaroid property, from operators $A$ and $B^*$ to the generalized derivation $\delta_{A,B}$. As a consequence, we give necessary and sufficient conditions for $\delta_{A,B}$ to satisfy generalized a-Browder’s theorem and generalized a-Weyl’s theorem. As application, we extend some recent results concerning Weyl type theorems.

References


