

Abstract

In the present paper, we introduce and study the concept of norms of derivations, in particular norm estimates of derivations implemented by self-adjoint operators. We show that $\|\delta_C\| = \|CX - XC\| \leq 2\|C\|$, for inner derivation while for generalized derivation we establish that $\|\delta_{C,D}\| = \|C\| + \|D\|$, for all $C, D, X \in B(H)$. We also estimate that $\|C\| \leq \|CX - XC\| \leq 2\|C\|$ and $\|\delta_C\| \geq 2(\|C\|^2 + \beta^2)^{1/2}$