On Some n-Involution and k-Potent Operators on Hilbert Spaces

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Abstract:

In this paper, we survey various results concerning n-involution operators and k-potent operators in Hilbert spaces. We gain insight by studying the operator equation n T I = , with , 1 k T I k n ≠ ≤ − where n k, $\in \mathbb{N}$. We study the structure of such operators and attempt to gain information about the structure of closely related operators, associated operators and the attendant spectral geometry. The paper concludes with some applications in integral equations. Keywords: n-Involution, Idempotent, Spectral Radius, Twist, Invection, Q-Equivalence