

Spectral properties of analytic operators

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Abstract

Let X be a Banach space and $T \in L(X)$, the operator T is said to cyclic if there exist $x \in X$ (called a cyclic vector for T) such that $X = \text{span}\{T^n x : n \geq 0\}$. Analytic operators are defined as bounded cyclic operators whose adjoint has a rich set of eigenvectors. We describe the commutant of analytic operators and derive some spectral properties of such operators. We also investigate spectral properties of restrictions to invariant spaces.