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About operator weighted shift

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摘要

关键词   Operator weighted shift   Strongly irriducible operator   Similarity   Commutant   Jacobson radical

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Abstract Let ${\mathscr H}$ be a complex seperable Hilbert space and ${\mathscr L}({\mathscr H})$ denote the collection of bounded linear operators on ${\mathscr H}$. For an operator in ${\mathscr L}({\mathscr H})$, $\operatorname*{rad}\{A\}^{\prime}$ denotes the Jacobson radical of the commutant of A. This paper characterizes the similarity of strongly irreducible operator weighted shift in terms of $\{A\}^{\prime }/\operatorname*{rad}\{A\}^{\prime}$. Moreover, we suggest some ways to determine when an operator weighted shift is strongly irreducible and when its commutant is commutative.

Key words   Operator weighted shift   Strongly irriducible operator   Similarity   Commutant   Jacobson radical

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