

ON EXTENSIONS OF J -SKEW-SYMMETRIC AND J -ISOMETRIC OPERATORS

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Abstract. In this paper it is proved that each densely defined J -skew-symmetric operator (or each J -isometric operator with $\overline{D(A)} = \overline{R(A)} = H$) in a separable Hilbert space H has a J -skew-self-adjoint (respectively J -unitary) extension in a separable Hilbert space $\tilde{H} \supseteq H$. We follow the ideas of Galindo in [A. Galindo, On the existence of J -self-adjoint extensions of J -symmetric operators with adjoint, Comm. Pure Appl. Math., Vol. XV, 423–425 (1962)] with necessary modifications.

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