

MATRIX VALUED CONJUGATE CONVOLUTION OPERATORS ON MATRIX VALUED L^p -SPACES

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Abstract. Let G be a locally compact group equipped with the left Haar measure m_G , M_n be an $n \times n$ matrix with entries in \mathbb{C} and let $M(G, M_n)$ be the Banach algebra consisting all M_n -valued measures on G . We define the left and right conjugate convolution operators on $L^p(G, M_n)$ and characterize these operators. Moreover, we give some necessary and sufficient conditions, in terms of conjugate convolution, for a bounded operator on $L^p(G, M_n)$ to be translation invariant.

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