DILATIONS OF ONE PARAMETER SEMIGROUPS OF POSITIVE CONTRACTIONS ON $L^p$ SPACES

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ABSTRACT. It is proved in this note, that a strongly continuous semigroup of (sub)positive contractions acting on an $L^p$-space, for $1 < p < \infty$ and $p \neq 2$, can be dilated by a strongly continuous group of (sub)positive isometries in a manner analogous to the dilation M. A. Akçoglu and L. Sucheston constructed for a discrete semigroup of (sub)positive contractions. From this an improvement of a von Neumann type estimation, due to R. R. Coifman and G. Weiss, on the transfer map belonging to the semigroup is deduced.

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