

1099-47-332

Stefania A.M. Marcantognini* (smarcant@ivic.gob.ve), Km. 11 Carretera Panamericana, Altos de Pipe, Caracas, Miranda , Venezuela. *The dilation theorem of uniformly continuous semigroups of bounded operators*. Preliminary report.

The talk concerns joint work with A. Méndez (Universidad Central de Venezuela).

We give a new proof of Davis Dilation Theorem: Given a uniformly continuous one-parameter semigroup $\{T(s)\}$ on a Hilbert space \mathfrak{H} , there exist a Krein space \mathfrak{K} containing \mathfrak{H} as regular subspace and a strongly continuous one-parameter group $\{U(s)\}$ of unitary operators on \mathfrak{K} such that $T(s) = P_{\mathfrak{H}}U(s)|_{\mathfrak{H}}$ for all $s \geq 0$ and $\mathfrak{K} = \vee\{U(s)\mathfrak{H} : s \in \mathbb{R}\}$. (C. Davies, Rev. Roum. Math. Pures et Appl., 1970.)

The arguments in the proof can be easily extended to the case of strongly continuous one-parameter semigroups with sectorial infinitesimal generators, as considered in (B. McEnnis, J. Operator Theory, 1990.) (Received February 11, 2014)