1032-47-91 **Stefania A.M. Marcantognini*** (smarcant@ivic.ve), Dept. of Mathematics, Km. 11, Carretera Panamericana, Altos de Pipe, Caracas, Venezuela. *A Schur-type analysis of the minimal weak unitary dilations of a given contraction operator.* Preliminary report.

Let X be a contraction operator on a Hilbert space $\mathcal{A}$ defined on a linear subspace $\mathcal{B} \subseteq \mathcal{A}$. A weak unitary dilation of X is a unitary operator U defined on a Hilbert space $\widetilde{\mathcal{A}} \supseteq \mathcal{A}$ such that $P_{\mathcal{A}}U|_{\mathcal{B}} = X$. A weak unitary dilation U on $\widetilde{\mathcal{A}}$ is said to be minimal if $\mathcal{A}$ is cyclic for U. Two minimal weak unitary dilations of X, say U on $\widetilde{\mathcal{A}}$ and U' on $\widetilde{\mathcal{A}}'$, are regarded as indistinguishable whenever there exists a unitary operator $\Phi : \widetilde{\mathcal{A}} \to \widetilde{\mathcal{A}}'$ such that $\Phi|_{\mathcal{A}} = 1$ and $\Phi U = U'\Phi$. We present a description of the minimal weak unitary dilations of $X : \mathcal{B} \to \mathcal{A}$ in terms of a class of Schur functions. The derived functional model may be used to parametrize the interpolants in the Relaxed Commutant Lifting Theorem in a similar way as the Arov-Grossman model yields a parametrization of the interpolants in the classical Sarason-Sz.-Nagy-Foias Commutant Lifting Theorem.

The talk concerns joint work with M.D. Morán (Universidad Central de Venezuela, Caracas, Venezuela (Received August 14, 2007)