1106-47-801 Paul S. Muhly and Baruch Solel* (mabaruch@tx.technion.ac.il), Department of Mathematics, Technion, 32000 Haifa, Israel. Matricial function theory and weighted shifts.

Let $H^\infty(E)$ be the Hardy algebra of a $W^*$-correspondence $E$ over a $W^*$-algebra $M$. These algebras are generated by a copy of $M$ and shifts (defined by the elements of $E$). Each element $F \in H^\infty(E)$ gives rise to a family $\{\hat{F}_\sigma\}$ of analytic operator valued functions where $\sigma$ runs over the normal representations of $M$ and $\hat{F}_\sigma$ is defined on the (open) unit ball of the operator space $E^{\sigma^*}$ (associated with $E$ and $\sigma$). Such a family exhibit “matricial structure” that we studied in previous works (inspired by works of Joseph Taylor, Kaliuzhnyi-Verbovetskyi and Vinnikov, D. Voiculescu and others).

In this talk I will show that one can study matricial families of operator-valued functions defined on more general matricial sets (not necessarily unit balls) by studying Hardy algebras generated by a copy of $M$ and weighted shifts. This work generalizes some results of G. Popescu. (Received September 07, 2014)