1106-47-797 **G. Marx*** (`marxg@vt.edu`), **J. A. Ball** and **V. Vinnikov**. *Complete Pick kernels: the noncommutative setting.*

Given a positive kernel K with associated reproducing kernel Hilbert space $\mathcal{H}(K)$, one says that K is a complete Pick kernel if positivity of a single Pick matrix associated with the interpolation data is always both necessary and sufficient for solvability of the associated matrix multiplier interpolation problem. It is now well known that the Drury-Arveson kernel $k_d(z, w) = \frac{1}{1 - z_1 \overline{w}_1 - \cdots - z_d \overline{w}_d}$ on the unit ball $\mathbb{B}^d \subset \mathbb{C}^d$ has a certain universal property with respect to irreducible complete Pick kernels.

We discuss a noncommutative analogue of positive kernel and associated reproducing kernel Hilbert space and formulate the interpolation problem for contractive multipliers in this setting. A particular such kernel (called the noncommutative Szegő kernel) has associated reproducing kernel Hilbert space equal to the Fock space appearing in Popescu's Sz-Nagy-Foias model theory for row contractions. We show that this noncommutative Szegő kernel has the complete Pick property and is a likely candidate for having the universal property with respect to arbitrary noncommutative complete Pick kernels. (Received September 09, 2014)