1142-47-45 **Cheng Chu*** (cheng.chu@vanderbilt.edu), 1326 Stevenson Center, Nashville, TN 37240.

Reducing Subspaces of de Branges-Rovnyak Spaces.

For $b \in H^\infty_1$, the closed unit ball of H^∞, the de Branges-Rovnyak spaces $\mathcal{H}(b)$ is a Hilbert space contractively contained in the Hardy space H^2 that is invariant by the backward shift operator S^*. We study the reducing subspaces of the operator $S^{*2}|_{\mathcal{H}(b)}$.

When b is an inner function, $S^{*2}|_{\mathcal{H}(b)}$ is a truncated Toepltiz operator and its reducibility was characterized by Douglas and Foias using model theory. We use another approach to extend their result to the case where b is extreme. (Received August 21, 2018)