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**Isabelle Chalendar** and **George R. Exner\*** (exner@bucknell.edu), Department of Mathematics, Bucknell University, One Dent Drive, Lewisburg, PA 17837. *Weighted shifts associated with composition operators: fixed points and iteration points.*

Let  $\varphi$  be a linear fractional transformation mapping the open unit disk  $\mathbb{D}$  to itself with Denjoy-Wolff point 1 and a distinct fixed point  $w$  in  $\mathbb{C} \setminus \mathbb{D}$ . Consider the composition operator  $C_\varphi$  on the Hardy space  $H^2(\mathbb{D})$ . If  $z$  is a point of  $\mathbb{D}$ , the restriction of  $C_\varphi^*$  to an invariant subspace arising from the reproducing kernels  $(k_{\varphi^n(z)})_{n=1}^\infty$  is similar to a weighted shift  $W$ . We show that hyponormality (equivalently, and surprisingly, subnormality) of  $W$ , or its lack, reflects information about the locations of  $w$  and  $z$  in pleasing geometrical ways. (Received September 08, 2018)