Sivaram K Narayan* (sivaram.narayan@cmich.edu), Department of Mathematics, Central Michigan University, Mount Pleasant, MI 48859, and Daniel Sievewright and Derek Thompson. Complex symmetric composition operators on $H^2$.

We say that a bounded operator $T$ on a complex Hilbert space $H$ is complex symmetric if there exists a conjugation (i.e., a conjugate linear, isometric involution) $J$ such that $T = JT^*J$. In this talk, we will discuss the complex symmetry of composition operators $C_\varphi f = f \circ \varphi$ induced on the Hardy space $H^2$ by analytic self-maps $\varphi$ of the open unit disk $\mathbb{D}$. We show that there are complex symmetric composition operators on $H^2$ induced by $\varphi$ that are linear-fractional but not automorphisms. In doing so, we answer a recent question of Noor, and partially answer the original problem posed by Garcia and Hammond. (Received February 18, 2016)