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Maria Tjani* (mtjani@uark.edu). *Complex symmetric composition operators on weighted Hardy spaces.*

A bounded linear operator T on a complex Hilbert space \mathcal{H} is called complex symmetric if there exists an isometric and conjugate-linear involution C of \mathcal{H} such that $T = CT^*C$. Let φ be an analytic self-map of the open unit disk \mathbb{D} . We study the complex symmetry of composition operators C_φ on weighted Hardy spaces induced by a bounded sequence. For any analytic self-map of \mathbb{D} that is not an elliptic automorphism, we establish that if C_φ is complex symmetric, then either $\varphi(0) = 0$ or φ is linear. In the case of weighted Bergman spaces A_α^2 , we find the non-automorphic linear fractional symbols φ such that C_φ is complex symmetric. This is joint work with Sivaram K. Narayan and Daniel Sievewright. (Received August 19, 2021)