Direct imaging of exoplanets and debris disks with HST and JWST

Space telescopes are exquisite facilities for the direct observation of exoplanetary systems. They provide the stability and sensitivity that ground-based instruments difficultly strive for to image these systems, tenuous objects at high contrasts and short separations from their host star. Through the late 1990's and all the 2000's, HST has been the prime facility to image and characterize debris disks in scattered light, providing valuable information about their population and dust properties. Now, JWST is also providing images of young giant planets, pinning down their thermal and atmospheric properties at high precision thanks to its unique IR sensitivity. The combination of both HST and JWST now offers unique opportunities to study the links and dynamical interactions between exoplanets and debris disks. In this presentation, I will review the main results and advances given by both telescopes, and discuss the prospects for combined observations of exoplanetary systems.