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Mark Green, Yoon-Joo Kim* (yoon-joo.kim@stonybrook.edu), **Radu Laza** and **Colleen Robles**. *Cohomology decomposition of hyperkähler manifolds*.

Looijenga, Lunts and Verbitsky showed the cohomology of a compact hyperkähler manifold admits additional symmetries than that of the usual compact Kähler manifolds. This symmetry structure on the cohomology dominates the Hodge structure, hard Lefschetz decomposition and hyperkähler rotations. In this talk, I will discuss the cohomology decomposition of hyperkähler manifolds with respect to this symmetry structure, and compute them explicitly for all currently known examples of hyperkähler manifolds. This is joint work with Mark Green, Radu Laza and Colleen Robles. (Received August 11, 2020)