

## **The defect of a cubic threefold**

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Cubic hypersurfaces are important examples of algebraic varieties, and it is interesting to understand their properties and numerical invariants. In this talk, we focus on cohomology of complex cubic threefolds with isolated singularities. The cohomology of such a threefold  $X$  is essentially determined by the types of its singularities and its defect  $\sigma(X) := b_4(X) - b_2(X)$ . We will relate  $\sigma(X)$  to certain geometric features of  $X$ . Time permitting, we will explain the connection of our results to a construction of a Hyperkähler manifold due to Laza, Saccà and Voisin. This is a joint work in progress with Lisa Marquand.